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EVALUATION OF UNITED STATES AIR FORCE BASE  
LIBRARIES SUPPORTING UNDERGRADUATE AND  
GRADUATE EDUCATION PROGRAMS IN  
COLLABORATION WITH CIVILIAN  
COLLEGES AND UNIVERSITIES

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A Dissertation

Presented to

the Faculty of the Graduate School of Arts and Sciences

University of Denver

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In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

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by

Harrold Southard Shipps, Jr.

May 1969

AUG 5 1969

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THE GRADUATE SCHOOL OF ARTS AND SCIENCES

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Upon the recommendation of the director of the  
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## ABSTRACT

The purpose of this study was to determine the adequacy of base library service and collections to support the undergraduate and graduate study programs undertaken on United States Air Force installations by officers and airmen, through civilian institutions, during off-duty hours. Basic to the study was the development of a method of library evaluation that would be applicable to the individual base libraries concerned with supporting specific academic programs, yet at the same time have the broad applicability necessary to establish it as a rating system for any Air Force base library engaged in supporting such programs.

The evaluation system developed consisted of a formula of point scales to be used in rating the following resource and service elements of the base libraries: (1) the book collection, (2) the periodical and newspaper collection, (3) indexes and abstracts, (4) dictionaries, (5) encyclopedias, (6) professional reference service and (7) supplementary resources, including duplicate copies of required reading materials, back numbers of periodicals, indexes and abstracts, microtext materials, and the resources of other libraries. Raw scores assigned to library questionnaires were



converted to percentage scores. Specific percentage score ranges were designated to be applicable to corresponding adjectival ratings.

Seventy-one base libraries within the continental United States were studied. The period encompassed was the autumn academic term of 1967. Questionnaires sent to Air Force base education services officers provided information on course offerings and on the required and recommended readings assigned by instructors. This information was used in the preparation of questionnaires sent to the base librarians. Of the seventy-one libraries, forty-one were concerned with the support of undergraduate programs only, thirty were involved in supporting only graduate programs or combinations of graduate and undergraduate programs.

With a few notable exceptions, Air Force base libraries were found to be generally inadequate insofar as their capacity to support off-duty education programs of undergraduate and graduate level was concerned. Inadequate communication between base librarians and representatives of the educational institutions was a factor which underlay the lack of curriculum-related library resources. Existing personnel authorizations and levels of expenditure for library materials were other contributing factors.

Recommendations made as a result of the study included the following. (1) that contractual arrangements between the Air Force and civilian educational institutions sponsoring off-duty education

programs clearly reflect consideration of requirements for library service, and (2) that specific guidelines, special budget assistance and increased professional staff authorizations be provided to base libraries which have full responsibility for supporting undergraduate and graduate programs conducted on Air Force bases by civilian colleges and universities.

## ACKNOWLEDGMENTS

A study of this type and scope would not have been possible without cooperative assistance from many United States Air Force officials. The author extends particular appreciation to Brigadier General Robert F. McDermott, former Dean of the Faculty, United States Air Force Academy, who initially recommended him for this program of study. Grateful acknowledgment is made, also, of the contributions of Colonel George V. Fagan, Director of the United States Air Force Academy Library, who helped secure Air Force sponsorship of the undertaking and subsequently monitored the progress of the dissertation. John L. Cook, Director of United States Air Force Library Service, and Robert W. Quick, Chief, Education Services, Headquarters United States Air Force, in granting their approval to the dissertation proposal and in fostering its development, prepared the way for active support and cooperation of their staff counterparts at major air command level and, in turn, for the participation of base librarians and base education services officers.

The author is especially grateful for the editorial guidance and procedural recommendations of Donald J. Barrett, Chief, Public

Services Division, United States Air Force Academy Library; Lieutenant Colonel Lawrence G. Campbell, Tenure Associate Professor of Mathematics, United States Air Force Academy; Lucia Gordon, Command Librarian, Aerospace Defense Command; Major Oakah L. Jones, Jr., Tenure Associate Professor of History, United States Air Force Academy; and Edwin Peterson, Chief, Education Division, Aerospace Defense Command.

Primary acknowledgment, however, is owed to Dr. William M. Slaichert, Professor of Education and Coordinator of Graduate Programs, University of Denver, who, in his capacity as adviser in this study, provided the sustaining encouragement and perceptive analysis so vital to the successful completion of a work of this kind.

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## CHAPTER 1

### INTRODUCTION

One of the goals of the United States Air Force is that every officer possess at least an undergraduate degree and that every enlisted member be provided opportunity to pursue post-secondary education and training.<sup>1</sup> To promote this dual objective, the Air Force offers to officers and enlisted members who enroll in academic programs conducted during off-duty hours financial assistance amounting to seventy-five percent of tuition costs.<sup>2</sup> Civilian institutions cooperate by making available courses of instruction leading to college credits through on-base and off-base education programs. In 1967 there were more than 350 colleges and universities which afforded Air Force personnel an opportunity to attend classes on or near their

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<sup>1</sup>United States Department of the Air Force, Air Force Manual 213-1, "Operation and Administration of the Air Force Education Services Program," June 21, 1968, paragraph 1-2.

<sup>2</sup>*Ibid.*, paragraph 3-2, and Letter, Colonel William G. Barton, Directorate for Personnel Training and Education (AFPTRE), Headquarters United States Air Force, to the major air commands and separate operating agencies, April 10, 1968, "Policy Statement on Collegiate Programs on Military Bases," and Attachment 1 thereto.

bases.<sup>3</sup> Generally regarded as essential to the completion of most college programs is the availability of library services and resources. All United States Air Force bases are authorized to maintain libraries for the use of military personnel and their dependents.<sup>4</sup>

## I. THE PROBLEM

The problem of this study is to determine the adequacy of base library service and collections to support the undergraduate and graduate study programs undertaken on United States Air Force installations by officers and airmen, through civilian institutions, during off-duty hours. Basic to the problem is the need to devise a method of library evaluation that is applicable to the individual base libraries involved in the support of particular programs of college-level off-duty education, yet one which is at the same time sufficiently broad in applicability and investigative coverage to serve as a rating system for any Air Force base library engaged in supporting such programs.

## II. JUSTIFICATION

The need to ensure reasonable standards of library support of

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<sup>3</sup>Statement by Robert W. Quick, Chief, Education Services, Headquarters United States Air Force, December 11, 1968, telephoned interview.

<sup>4</sup>United States Department of the Air Force, Air Force

Air Force-sponsored undergraduate and graduate programs is a basic one, inasmuch as the role of the library as a dimension of the college-level education process has long been acknowledged. If the educational programs are to be adequate and meaningful, a properly supported and administered library facility containing a carefully selected, systematically organized, conveniently available and currently useful collection of books and related library materials is a central requirement.

Large numbers of officers and airmen who respond to Air Force encouragement to participate in courses leading to college degrees must necessarily place heavy reliance on Air Force base library resources, particularly when the courses are taught on Air Force installations. Despite the fact that the basic directive governing Air Force Library Service, Air Force Regulation 212-1, does not at this time state categorically that the college-level, on-base program is a responsibility of the base library, this function is generally acknowledged to be a part of the mission of the base library.<sup>5</sup>

Affirmation of Air Force responsibility concerning the provision of library support to the education program is contained in a recent letter sent to all major air commands by the Directorate for

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Regulation 212-1, "Air Force Library Service," March 22, 1965, paragraph 3.

<sup>5</sup>United States Department of the Air Force Air Force Regulation 212-1, "Air Force Library Service," March 22, 1965 and

Personnel Training and Education, Headquarters United States Air Force. Attached to the letter was a copy of "Policy Statement on Collegiate Programs on Military Bases," adopted in October 1966 by the Federation of Regional Accrediting Commissions. The policy statement is divided into the subsections "Guides and Obligations of the Military" and "Guides and Responsibilities of the College and University." With regard to military responsibility for library facilities, the policy statement reads. "Space for a library as well as certain basic library materials will be a requisite."<sup>6</sup> As to the obligation of the institution, the following injunction, though not unequivocal, expresses the need:

. . . The same degree of concern for teaching tools and learning sources should exist on base as exists on the home campus. Comparable library resources should be available or accessible.  
 . . .<sup>7</sup>

The author of the letter took care to point out that the policy statement was "not directive to institutions," and that the provisions were not in all cases binding on the regional associations, although the provisions represented "areas of general agreement."<sup>8</sup>

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Statement by John L. Cook, Director of United States Air Force Library Service, November 1, 1967, personal interview.

<sup>6</sup>Letter, Colonel William G. Barton, Directorate for Personnel Training and Education (AFPTRE), Headquarters United States Air Force to the major air commands and separate operating agencies, April 10, 1968. "Policy Statement on Collegiate Programs on Military Bases" and Attachment 1 thereto.

<sup>7</sup>Ibid. <sup>8</sup>Ibid.

Standards of library service contained in Air Force Regulation 212-1 are primarily quantitative. Criteria for the book collection are stated in terms of total number of books in relation to the total number of patrons to be served. The number of hours that a base library must remain open each week is specified, but the number of hours of reference service to be made available by a professional librarian each week is not prescribed.<sup>9</sup> The standards are designed to assure adequacy of support of the military command or organization with which the library is identified.<sup>10</sup> They do not focus on academic programs toward which the library may have responsibility. In the absence of published standards involving this area of interest, military libraries supporting undergraduate and graduate programs can be expected to vary widely in the quality of their assistance to officers and airmen.

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<sup>9</sup>United States Department of the Air Force, Air Force Regulation 212-1, "Air Force Library Service," March 22, 1965, Tables 1 and 2.

<sup>10</sup>The base library found at a typical Air Force base is categorized as a general library, the service responsibility of which is detailed in paragraph 2 of Air Force Regulation 212-1. John L. Cook, Director of Air Force Library Service, in a telephone conversation on August 14, 1968, suggested that a more precise designation would be mission support library, inasmuch as the collection and services are usually designed to support the multi-faceted mission of the organizations located on the same Air Force installation.

### III. AUTHORIZATIONS

Permission to conduct this study was sought first from Colonel George V. Fagan, Director of the United States Air Force Academy Library, whose resources and facilities were considered useful to the conduct of a study of Air Force libraries. The possibility that the results of an evaluation of base library support of education programs would be of interest to Air Force academic libraries was also a consideration in approaching Colonel Fagan. The latter gave his permission and helped secure the approval of John L. Cook, Director of United States Air Force Library Service.<sup>11, 12</sup> Cook later stipulated that command channels would have to be observed in obtaining approval to survey individual base libraries.<sup>13</sup>

Robert W. Quick, Chief of Education Services, Headquarters

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<sup>11</sup>Letter, Colonel George V. Fagan, Professor of History and Director of the Library, United States Air Force Academy, Colorado, to John L. Cook, Special Services Division, Directorate of Personnel Services, Headquarters United States Air Force (AFPMsBR1), Randolph Air Force Base, Texas, March 27, 1967, "Doctoral Dissertation Proposal."

<sup>12</sup>Letter, John L. Cook, Director, United States Air Force Library Service, Directorate of Personnel Services, Headquarters United States Air Force, USAFMPC (AFPMsBR1), Randolph Air Force Base, Texas, to Colonel George V. Fagan, Professor of History and Director of the Library, United States Air Force Academy, Colorado, April 10, 1967, "Doctoral Dissertation Proposal."

<sup>13</sup>Letter, John L. Cook, September 12, 1967, to the writer.

United States Air Force, authorized solicitation of assistance from Air Force base education officers in furtherance of the research.<sup>14</sup>

The support of the major air commands and separate operating agencies was obtained in all instances except that of Air Force Systems Command, whose Director of Personnel Programs stated that base education services and base library personnel were "currently under staffed and over worked," and that the additional effort involved in the proposed survey "would serve to reduce already limited services being provided. . . ."<sup>15</sup> The command librarian of Continental Air Command (since renamed Headquarters Air Force Reserve) indicated willingness to help in any way possible, but pointed out that within that command there were no courses being offered on base.<sup>16</sup> The existence of on-base courses being a basic criterion in the survey, Continental Air Command was not included in the study.

Permission to conduct a pilot study at Ent Air Force Base,

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<sup>14</sup>Letter, Robert W. Quick, Chief, Education Services, Headquarters United States Air Force, February 8, 1967, to the writer.

<sup>15</sup>1st Indorsement, Colonel Omer L. Cox, Director of Personnel Programs, Headquarters Air Force Systems Command, to United States Air Force Academy Library (DFS LB) letters of September 13 and September 22, 1967, "Survey of Base Libraries," September 27, 1967.

<sup>16</sup>Letter, William J. Nesbitt, Continental Air Command Librarian, Headquarters Continental Air Command, Robins Air Force Base, Georgia, to the Academy Library (DFS LB), Attention: Colonel George V. Fagan, United States Air Force Academy, Colorado, October 5, 1967, "Assistance in Survey."

Colorado, was obtained from Lucia Gordon, Command Librarian, and Edwin Peterson, Chief, Education Division, both of Air Defense Command (since redesignated Aerospace Defense Command).

Through a formal letter to the command librarians concerned, authorization was obtained for visits to selected libraries, in order to verify the accuracy of the questionnaire entries.<sup>17</sup> When circumstances made possible a visit to the Air University Library, Robert Severance, Director, granted permission for that library to be added to the list of those included in the verification procedure.

Approval for access to Air Force historical records stored in the Archives Branch, Historical Division, Aerospace Studies Institute, Maxwell Air Force Base, Alabama, was issued by the Office of Information, Public Information Division, Office of the Secretary of the Air Force.<sup>18</sup>

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<sup>17</sup>Letter, Colonel George V. Fagan, Professor of History and Director of the Library, United States Air Force Academy, Colorado, to Lucia Gordon, Command Librarian, Aerospace Defense Command; Command Library Services Officer, Air Force Logistics Command; Elizabeth Fuller, Command Librarian, Tactical Air Command; Loutrell E. Cavin, Command Librarian, Strategic Air Command; B. Louise Nabors, Command Librarian, Air Training Command; and Command Library Services Officer, Headquarters Command, United States Air Force, May 22, 1968, "Library Survey."

<sup>18</sup>Letter, Colonel L. J. Churchville, Chief, Public Information Division, Office of Information, Office of the Secretary, Department of the Air Force, July 11, 1968, to the writer.



#### IV. DELIMITATIONS

A survey of all Air Force base libraries supporting college-level education programs was not considered feasible. The global mission of the Air Force has served to extend its military facilities, including libraries, to nearly all parts of the free world. Accordingly, several practical limitations to the study were established in order to ensure a realistic and manageable framework.

Range. The study encompassed base libraries at United States Air Force bases within the continental United States where college-level, off-duty education programs were offered. The basic source of information was a Headquarters United States Air Force listing of May 1967.<sup>19</sup>

Military jurisdictions. The study was limited to base libraries at United States Air Force installations operating under the jurisdiction of the following major air commands or separate operating agencies (1) Aerospace Defense Command, (2) Air Force Logistics Command, (3) Air Training Command, (4) Air University, (5) Headquarters

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<sup>19</sup>Letter, Colonel William G. Barton, Directorate for Personnel Training and Education (AFPTRE), Headquarters United States Air Force, to the major air commands and separate operating agencies, May 5, 1967, "Major Post-Secondary Program Opportunities," and Attachments 1 and 2 thereto.

Command, (6) Military Airlift Command, (7) Strategic Air Command, (8) Tactical Air Command and (9) United States Air Force Security Service.

Educational programs. The survey included base libraries supporting civilian academic programs offered during off-duty hours on military installations, rather than on the campus of the college or university. Only educational programs leading to undergraduate or graduate degrees were included. Junior college programs and other such programs of a duration of two years or less were excluded from the survey. The study did not include the libraries affiliated with the Minuteman Education Program (cf. pages 241-243, Glossary), which at the time of this survey was operated, with one exception, through contracts with civilian universities situated near Minuteman missile bases of Strategic Air Command.<sup>20</sup>

Time. The period on which the study focused was the first academic term of the autumn of 1967.

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<sup>20</sup>United States Department of the Air Force, Air Force Institute of Technology, "Commandant's Annual Report, 1967," Contact, XXII (April, 1968), 50.

## CHAPTER II

### BACKGROUND

A review of the evolutionary development of college-level education programs in the Air Force is appropriate for an understanding of the role of the library system on which such programs depend. The interrelationship of educational undertakings and library service is a commonly accepted principle in the academic world.

#### I. EDUCATIONAL PROGRAMS

Legislative authority for academic programs in the United States military establishment can be traced to 1866 when Congress made mandatory the organization of schools for the instruction of enlisted men "in the common English branches of education and especially in the history of the United States" at every "post, garrison, or permanent camp."<sup>1</sup> The National Defense Act of 1916 made provision for soldiers to be afforded opportunity to study and to be given educational instruction that would improve their military efficiency and prepare them "to return to civilian life better equipped for industrial,

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<sup>1</sup> 14 Stat. 336 (1866).

commercial and general business occupations."<sup>2</sup> This Act was amended in 1920 to provide authority for the Secretary of War to detail in any fiscal year up to two percent of the officers of the Regular Army to duty as students at educational institutions, with tuition costs to be borne by the United States Government.<sup>3</sup>

During and immediately after World War II, the National Defense Act of 1916, as amended, was cited as the basic authority for detailing officers and enlisted men of the Regular Army and other components to civilian educational institutions.<sup>4</sup> In 1946 the War Department provided maximum student quotas of 2,000 for the Army Air Forces, 500 for the Army Ground Forces and 1,000 for Army Service Forces officers and enlisted men to attend civilian educational institutions and industrial plants, to take effect in 1947.<sup>5</sup> Concern was expressed over the need for officers of the Army Air Forces to keep abreast of

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<sup>2</sup>39 Stat. 186 (1916), 10 U.S.C. sec. 3402 (1964).

<sup>3</sup>51 Stat. 786 (1920), 10 U.S.C. sec. 3401 (1964).

<sup>4</sup>Memorandum, War Department General Staff, Organization and Training Division, G-3, for the Commanding Generals, Army Air Forces, Army Ground Forces, Army Service Forces, January 14, 1946, "Courses of Instruction at Civilian Educational Institutions" (in the Archives Branch, Historical Division, Aerospace Studies Institute, Maxwell Air Force Base, Alabama). A listing of Archives Branch file numbers and corresponding documents used in this study is provided in Appendix B.

<sup>5</sup>Ibid.

developments and applications in the fields of science, engineering and management that would be appropriate to the uses and needs of national defense.<sup>6</sup>

Although the education of military personnel on campus at civilian educational institutions, as a phase of official duty, was thus generally provided for, the concept of college-level, off-duty educational opportunities on military installations was slower to materialize. The University of Maryland, through its College of Special and Continuation Studies, began offering courses in 1947 at the Aberdeen Proving Ground, Holabird Signal Depot and Fort George G. Meade, Maryland.<sup>7</sup> In that year it also conducted off-duty classes in speech at the Pentagon, and in 1948 a sociology course was offered at Bolling Air Force Base, District of Columbia.<sup>8</sup> The University of Maryland program at Bolling Air Force Base was soon enlarged, and before the end of 1948 a similar educational offering was made available at Andrews Air Force

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<sup>6</sup>Memorandum, Assistant Chief of the Air Staff-3, Training Division, to Special Planning Division, AC/AS-5, February 8, 1946, "AAF Post-Graduate Civilian Education Program" (in the files of the Archives Branch, Aerospace Studies Institute).

<sup>7</sup>David C. Berry, "The Principles of Non-Military Education as Practiced in the Education Program of the United States Army" (unpublished master's thesis, University of Maryland, 1952), p. 38.

<sup>8</sup>Letter, Stanley J. Drazek, Associate Dean, University College, University of Maryland, December 13, 1968, to the writer, and Letter, Louise G. Kudatsky, Research and Analysis Division, Office of the Secretary, Department of the Air Force, December 31, 1968, to the writer.

Base, Maryland.<sup>9</sup> In the summer of 1949, the University of Maryland suggested to the European Command of the United States Army and to United States Air Forces in Europe that college-level courses be made available to military personnel stationed in Europe, a proposal which was accepted by both headquarters.<sup>10</sup> In 1949 the University of Maryland established six education centers: Wiesbaden, Frankfurt, Munich, Berlin, Heidelberg and Nuremberg. Within three months after the October 1949 opening of the first six education centers, additional centers were established at Erding Air Base and Fürstenfeldbruck Air Base, Germany.<sup>11</sup>

In embarking on such a program, the University and the military establishment had the benefit of the record of enthusiastic response to an earlier, though not traceably related program: the Army University Centers of 1945, particularly those of Biarritz, France, and Shrivenham, England.

These two Universities were the top level units in a group of educational institutions established by the army in Europe,

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<sup>9</sup>Drazek, loc. cit.

<sup>10</sup>Headquarters United States Air Forces in Europe, Office of the Historian, A Short History of USAFE, 1 July - 31 December 1949, Historical Data (Wiesbaden, Germany, 1950), p. 122 (in the files of the Archives Branch, Aerospace Studies Institute).

<sup>11</sup>Ibid., p. 123.

including many trade schools. . . . The two Universities each had a student body of 4000 at one time.<sup>12</sup>

Planned as a means of usefully occupying substantial numbers of Army troops immediately after the defeat of Germany, during a period when all available shipping was being diverted to the Pacific Theater of Operations for the anticipated invasion of Japan, the Biarritz American University and Shrivenham American University were staffed by leading civilian educators on leave from colleges and universities in the United States and by selected officers and men of the United States Army.<sup>13</sup> Former faculty members have commented on the excellence of the student body, as follows:

The students, who were fresh out of combat, were even more phenomenal. None had been assigned. They had to apply voluntarily and only a small proportion could be accepted. I don't know how the army made the selections, but the boys who came were terrific. They were hungry for knowledge and had an intense desire to learn. . . . We literally had to lock the library at 1 AM to prevent them from studying all night. . . .<sup>14</sup>

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<sup>12</sup>Letter, Douglas M. Whitaker, former Chief of the Science Section, Shrivenham American University of the United States Army, November 3, 1968, to the writer.

<sup>13</sup>Letter, Ralph B. Kennard, former member of the physics faculty, Biarritz American University, and recruiter of other civilian faculty for the University, November 8, 1968, to the writer.

<sup>14</sup>Whitaker, loc. cit.

. . . The students ranged from private to leaf colonel, all having had some college experience before entering the Army. . . . There was a surprising interest in literature, theatre, and art, surprising, for the entire four thousand students of the first term had seen combat duty. Still, many elected to take hard courses in math, the sciences, etc. . . . The faculty was unanimous in their praise and many said that they had never taught a group as competent and highly motivated.

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Political events had helped to set the stage for an overseas education program of the kind begun by the University of Maryland in 1949. The failure of the Moscow Conference of March 1947 and the London Conference of November 1947 to achieve agreement between the Soviet Union and the West, with regard to a peace treaty for Germany, coupled with the 1947 Soviet territorial expansion into eastern Europe, provided a probable rationale for a long-term American occupation force in Europe.<sup>16</sup> The Russian blockade of West Berlin in June 1948, following the signing of the Brussels Treaty in March of that year, further intensified United States involvement in the East-West incompatibility of interest.<sup>17</sup> The

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<sup>15</sup>Letter, Stanley A. Cain, former Chief of the Science Section, Biarritz American University, October 30, 1968, to the writer.

<sup>16</sup>North Atlantic Treaty Organization, NATO Facts about the North Atlantic Treaty Organization (Paris: NATO Information Service, 1965), pp. 4-5.

<sup>17</sup>Ibid., pp. 10-11.



North Atlantic Treaty of April 4, 1949, unequivocally confirmed the commitment of the United States to the defense of Europe.<sup>18</sup> The cumulative effect of these events was apparently sufficient to allow planners to fashion a long-range program of college-level, off-duty education. There was, by 1949, ample reason to conclude that the potential student body would continue in being.

With a director and staff in Heidelberg, Germany, the European Division of the University of Maryland rapidly expanded its program of college-level, off-duty education at military bases on the European continent, the United Kingdom and Africa.<sup>19</sup> The impact of similar programs was soon felt at military installations in the Far East, where the University of California and later the University of Maryland established education centers.<sup>20</sup> By July 1958, when the Department of the Air Force assumed responsibility for logistical support of the University of Maryland off-duty

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<sup>18</sup>Ibid., pp. 15-18.

<sup>19</sup>University of Maryland, European Division, Catalog, 1967-68, p. 12.

<sup>20</sup>Headquarters United States Air Force, Deputy Chief of Staff/Personnel, Directorate of Military Personnel, Personnel Services Division, Education and Libraries Branch, Staff History, January 1, 1956 to June 30, 1956, Vol. II, p. 331 (in the files of the Archives Branch, Aerospace Studies Institute, the source of all Air Force staff histories cited hereafter in this study).

education program in the Far East, there were approximately 2,000 Air Force enrollments in that division of the institution per term.<sup>21</sup>

As a result of the National Security Act of 1947, the United States Air Force had become a separate branch of the armed forces.<sup>22</sup> No Headquarters United States Air Force staff office histories for the period prior to 1949 exist in the archives of the Historical Division, Aerospace Studies Institute, the official depository for such records, inasmuch as daily activity reports and periodic summaries initially served as the record-keeping instruments of the staff offices.<sup>23</sup> There are, however, official records sufficiently detailed to afford genuine insight into Air Force off-duty education efforts from fiscal year 1950 to the present.

Table I (Appendix C) depicts enrollment totals in college-level, off-duty education programs of the Air Force from the time of the initial semester of the University of Maryland overseas program through fiscal year 1968. In 1950 there were 6,446 officers and 9,520 airmen enrolled, or a total of 15,966. (See Glossary, Appendix A, for the special meaning of the word airman and for meanings of other

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<sup>21</sup>Ibid., January 1, 1958, to June 30, 1958, Vol. II, p. 32.

<sup>22</sup>61 Stat. 503 (1947).

<sup>23</sup>Statement by Frank C. Myers, Chief, Classification and Research Section, Historical Division, Aerospace Studies Institute, July 17, 1968, personal interview.

specialized terms used in this study.) A year later the total had more than doubled, reaching 33,654. In 1952 there were 17,693 officers and 34,244 airmen enrolled, or a total of 51,937. After a small increase in 1953, when the total was 53,699, substantial expansion of the program was evidenced in 1954, when 23,666 officers and 58,909 airmen participated. By 1960, enrollments totaled 107,221, including 29,850 officers and 77,371 airmen. Peak enrollment of officers occurred in 1963, when 44,821 officer enrollments were recorded. The year 1966 witnessed the highest airman enrollments, 145,784. The fiscal year 1968 enrollment total for officers was 28,679, and for airmen 135,319, a total of 163,998.<sup>24</sup>

Table II (Appendix C) shows the number of academic degrees earned by United States Air Force personnel through college-level, off-duty education programs, by fiscal year, from 1952 to 1968. Reporting procedures at Headquarters United States Air Force did not provide for identification of the level of the academic degrees awarded until 1965, when distinction was made between baccalaureate, master's and doctoral degrees in the compilations of Education

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<sup>24</sup>Totals for fiscal years 1950 through 1967 were obtained from Robert W. Quick, Chief, Education Services, Headquarters United States Air Force. Fiscal year 1968 totals were obtained by telephone from Master Sergeant Thomas M. Lee, Jr., of Education Services Branch, Headquarters United States Air Force, on October 16, 1968.

Services, Headquarters United States Air Force.<sup>25</sup> Although prior to fiscal year 1965 the compilation did not indicate the academic level of the degrees, the preponderance is reasonably certain to have been at the baccalaureate level. In fiscal year 1952 there were 755 degrees awarded. From 1953 to 1958, between 800 and 850 degrees were awarded annually. After a decline to 758 in 1958, the total reached 872 in 1959 and 1,060 in 1960, and it has exceeded 1,000 each year since then. In 1965 there were 1,476 baccalaureate degrees, 459 master's degrees and 8 doctoral degrees awarded through off-duty education programs. This appears to have been the high point of the program, at least at the baccalaureate level. In fiscal year 1968 only 748 baccalaureate degrees were earned by Air Force personnel through off-duty education, whereas 1,038 master's degrees and 9 doctoral degrees were achieved in that year.<sup>26</sup> As more officers have attained baccalaureate degrees, the emphasis has shifted to graduate-level effort.<sup>27</sup>

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<sup>25</sup>Statement by Robert W. Quick, Chief, Education Services, Headquarters United States Air Force, July 9, 1968, personal interview.

<sup>26</sup>Totals for fiscal years 1950 through 1967 were obtained from Robert W. Quick by personal interview and by examination of the records maintained in his office. Fiscal year 1968 totals were provided by Mr. Quick in a letter dated September 19, 1968.

<sup>27</sup>This conclusion is based on comments made by Robert W. Quick during a personal interview on July 9, 1968.

Among the factors serving to stimulate participation in off-duty education has been that of subsidy. Tuition assistance was offered originally to officers in the grade of first lieutenant and below, and to enlisted men.<sup>28</sup> In 1954, however, it was extended to all Air Force personnel, regardless of rank, but with the provision that commissioned officers who accepted tuition assistance would have to agree to remain on active duty for at least two years after completing any class for which they received such assistance.<sup>29</sup> Congress, in the Department of Defense Appropriation Acts for fiscal years 1955 and 1956, stipulated that a maximum of seventy-five percent of the charges of educational institutions for tuition and related expenses for the off-duty education of military personnel might be paid for by appropriated funds,<sup>30</sup> a policy still in effect.<sup>31</sup> Table III (Appendix C) provides a clear indication of Air Force investment in tuition assistance. In fiscal year 1950 the sum of \$585,846 was expended for the off-duty

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<sup>28</sup>Headquarters United States Air Force, Deputy Chief of Staff/Personnel, Directorate of Military Personnel, Personnel Services Division, Education and Libraries Branch, Semiannual History July 1, 1954, to December 31, 1954, Vol. II, p. 251.

<sup>29</sup>Ibid.

<sup>30</sup>60 Stat. 355 (1954), 69 Stat. 320 (1955)

<sup>31</sup>United States Department of the Air Force, Air Force Manual 213-1, "Operation and Administration of the Air Force Education Services Program," June 21, 1968, paragraph 3-2.

education of Air Force personnel. By fiscal year 1952 the total had reached \$1,309,007. Eight years later it exceeded \$2,000,000; in fiscal year 1962 the total was \$3,127,440; in the following year, \$4,798,544. By fiscal year 1968, \$5,212,373 was the annual expenditure for this purpose.<sup>32</sup> These totals include tuition assistance for programs other than college-level education, however, since off-duty educational enrollment represented by college-level programs has not been less than eighty percent of the overall total enrollment since fiscal year 1951, it can be concluded that no less than eighty percent of these totals encompassed college-level tuition assistance.<sup>33</sup>

From its relatively modest level of participation in 1949 college-level, off-duty education made fairly consistent progress, not only overseas but also in the continental United States. Cooperative arrangements between the Air Force and 191 colleges and universities were reported in an Education Services Branch history in 1954.<sup>34</sup> Although the report does not clearly specify that all of

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<sup>32</sup>Totals for fiscal years 1950 through 1967 were obtained from Robert W. Quick, Chief, Education Services, Headquarters United States Air Force. Fiscal year 1968 total was obtained by telephone from Master Sergeant Thomas M. Lee, Jr., of Education Services Branch, Headquarters United States Air Force, on October 16, 1968.

<sup>33</sup>This conclusion is based on an examination of records in the office of Robert W. Quick.

<sup>34</sup>Headquarters United States Air Force, Deputy Chief of Staff/

these were related to the off-duty program, the presumption is that most of them were; for, as indicated in Table I (Appendix C), there were 71,887 officers and airmen enrolled in off-duty education programs of college level in that year. Within another twelve months, the number of colleges and universities "cooperating with the Air Force" had reached 214.<sup>35</sup>

A noteworthy stimulus to off-duty education occurred with a 1956 announcement of specific educational goals. The Department of the Air Force, seriously concerned over reports reaching the Secretary of Defense in 1955, to the effect that "many prisoners captured during the Korean conflict were educationally at a distinct disadvantage," began placing special emphasis on educational effort.<sup>36</sup> An Air Force numbered letter of February 1956, circulated to all units, reflected this concern.

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Personnel, Directorate of Military Personnel, Personnel Services Division, Education Services Branch, Semiannual History, January 1, 1954, to June 30, 1954, Vol. II, p. 517.

<sup>35</sup>Headquarters United States Air Force, Deputy Chief of Staff/Personnel, Directorate of Military Personnel, Personnel Services Division, Education and Libraries Branch, Semiannual History, January 1, 1955, to June 30, 1955, Vol. II, p. 241.

<sup>36</sup>United States Department of the Air Force, Air Force Letter 34-8, "Education Services for Members of the Air Force," February 3, 1956 (in the files of the Authority Library Section, Air University Library, Maxwell Air Force Base, Alabama).

Members of the Air Force will be given the best education and training possible so that they can resist enemy indoctrination either at the present time or in future conflicts. . . . It is desired that the fullest support consistent with the primary mission of the Air Force be given to the provision of adequate educational opportunities during off-duty hours. The minimum goal for each officer is a college degree and for each airman a high school diploma [italics not in the original].<sup>37</sup>

Although the impact of this letter on Air Force officers cannot be precisely gauged, it is interesting to note that the enrollment of officers in off-duty education in fiscal year 1956, as reflected in Table I (Appendix C), reached the highest point it had achieved up to that time, and established a record not surpassed until fiscal year 1961.

A more overriding cause of the surge of officer enrollment in off-duty education in that year may have been the impact of Public Law 737, the Armed Forces Regular Officer Augmentation Act of 1956, which raised authorized Regular Air Force officer strength from 27,500 to 69,425.<sup>38</sup> In effect, the law provided opportunity for thousands of active duty Air Force Reserve officers to apply for appointment into the Regular component. The passage of this legislation was attended by widespread publicity; in fact, the entire text of the Air Force implementing directive was published in advance by the Army.

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<sup>37</sup>Ibid.

<sup>38</sup>70 Stat. 587 (1956).



Navy, Air Force Journal.<sup>39</sup> A clue to the effect of the Augmentation Act on education can be derived from the following excerpt from Air Force Regulation 36-5, which prescribed application procedures:

While not mandatory, a baccalaureate degree is desirable particularly in the fields of engineering, the basic sciences, or management or its related fields. At the time of application, an applicant must have been granted a minimum of 60 semester hours (90 quarter hours) credit toward a baccalaureate degree from a college or university. . . .<sup>40</sup>

Shortcomings in Air Force officer educational achievement were illuminated in a survey report compiled by the Air Force Educational Requirements Board in 1960, which revealed that twenty-three percent of Air Force line officers had only a high school education, nine percent had less than two years of college, twenty-three percent had between two and four years of college, forty percent held baccalaureate degrees, five percent had master's degrees, and considerably less than one-half of one percent held doctorates.<sup>41</sup> Table iV (Appendix C) details these findings. The Educational Requirements Board report

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<sup>39</sup>"This Is Complete Text of Proposed Air Force Augmentation Regulation," Army, Navy, Air Force Journal, XCIII (August 18, 1956), 2, 32.

<sup>40</sup>United States Department of the Air Force, Air Force Regulation 36-5, "Appointment of Officers in the Regular Air Force," September 13, 1956, paragraph 7.

<sup>41</sup>Headquarters Air University, Deputy Chief of Staff/Education, Evaluation Division, An Inventory of Formal Education of USAF Line Officers by Career Area, A Report Prepared for the Secretariat, Air

of 1960 illustrated the Air Force need for a broad program of educational opportunity for its line officers.

A Headquarters United States Air Force listing issued to all major air commands and separate operating agencies in the spring of 1968 enumerated 231 colleges and universities, including junior colleges and community colleges, that offered college-level programs on or near Air Force installations. Not included in the total of 231 are institutions offering only terminal-occupational courses, which also appear in the listing. As the letter accompanying the listing made clear, information relating to small and isolated locations had been omitted, and not all the educational opportunities in certain metropolitan areas were included.<sup>42</sup> It was, nevertheless, an extremely useful compilation of all major college-level programs of the category under discussion. Seven of the institutions conducted academic programs of off-duty education at or near Air Force installations overseas as well as in the United States. Fifty-four junior colleges offered programs of off-duty education within the continental United States, and two provided such programs overseas. Fifty-two institutions within

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Force Educational Requirements Board (Maxwell Air Force Base, Alabama, 1960), p. 260, included as a supporting document to Chapter II, "Significant Educational Accomplishments and Problems," Air University History, July 1, 1960.

<sup>42</sup>Letter, Colonel W. Staylor, Directorate for Personnel Training and Education (AFPTRE), Headquarters United States Air Force, to the major air commands and separate operating agencies, May 15, 1968, "Major Post-Secondary Program Opportunities," and Attachment 1 thereto.

the continental United States offered undergraduate programs only, and eight institutions with overseas programs provided only undergraduate curricula. Within the United States, seventy-six colleges or universities offered undergraduate and graduate programs at or near Air Force installations, as did eight institutions with overseas programs. Fifteen institutions in the United States and five located overseas offered graduate programs only. Fifteen in the United States conducted only undergraduate programs on base but offered graduate programs off the base. There were ninety-six institutions within the United States which offered college-level programs only on the military installation, one hundred which offered such programs at locations off the base only and nineteen which had programs conducted both on and off the military installation. Of twenty-three institutions conducting off-duty education programs overseas, twelve provided courses only on the military installation concerned, and eleven offered courses at locations off the base only. Table V (Appendix C) presents a summary of the educational offerings from the standpoint of the institutions making them available. As can be seen from Table V, there were one hundred fifteen colleges or universities providing on-base educational opportunities at Air Force bases within the continental United States, and twelve that performed a corresponding role at installations overseas.<sup>43</sup>

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<sup>43</sup>Ibid.

From the focal point of the installations themselves, rather than from that of the institutions serving them, Tables VI and VII (Appendix C) summarize the levels of academic programs available to Air Force personnel in their off-duty hours. Table VI is concerned with bases within the continental United States, whereas Table VII pertains to those overseas. Of the one hundred fifteen Air Force installations within the continental United States, sixty-two offered programs only on the base, twenty-four had programs off the base only and twenty-nine conducted programs involving instruction both on and off the base. Undergraduate programs, other than those of junior college level, were available on seventy-seven bases and on campuses or education centers near thirty-two other bases. Graduate-level programs were available on fifty-three Air Force installations and on campuses or education centers near forty-two other bases.<sup>44</sup>

As indicated in Table VIII (Appendix C), seventy-six bases overseas featured college-level, off-duty education programs. Only two of these failed to provide their personnel with classes on the military installation. Undergraduate programs, other than junior college-level programs, were available on seventy-four of the bases and at universities near two other bases. Graduate-level programs were available on twenty-nine bases overseas, and at campuses near three

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<sup>44</sup>Ibid.

other overseas bases.<sup>45</sup>

Only twenty-four Air Force bases within the continental United States did not have any college-level offering available on the base itself, according to the Headquarters United States Air Force letter pertaining to post-secondary programs. Many of these bases without on-site programs are sufficiently close to the colleges and universities which offer the classes, or to education centers established by them, to preclude grave inconvenience to military personnel who commute. It should be pointed out, however, with regard to Tables VI and VII, that not all Air Force installations were listed on the document which served as the basis for these tables. Numerous radar sites, missile sites and special mission installations that were not shown on the Headquarters United States Air Force listing did offer limited programs either on or near their locations, in collaboration with civilian institutions.<sup>46</sup>

## II. LIBRARY SERVICE

The present system of Air Force base libraries is a historical outgrowth of two forms of library service, the recreational library and

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<sup>45</sup>Ibid.

<sup>46</sup>Ibid.

the technical library. Some recreational libraries existed during the Civil War. In Connecticut regiments libraries were part of organizational equipment.

. . . These libraries by July, 1862, numbered 1284 volumes and 5450 magazines, shelved and locked in strong portable cases with a written catalogue and proper regimental labels. The books were on a great variety of subjects and were of good quality. . . .<sup>47</sup>

The United States Christian Commission "prepared and sent out 215 collections of 125 volumes each, and 70 collections of 75 volumes each," to general hospitals, major posts and naval vessels of the North during the Civil War.<sup>48</sup> Between the Civil War and World War I, however, libraries at Army posts were primarily "collections of works on tactics, military law, and military history for the use of officers."<sup>49</sup>

The War Library Service, a civilian organization formed by the American Library Association, assumed the responsibility for book distribution in the First World War. Through organized public support in 1917 and 1918, and with additional funds from the Carnegie Corporation of New York for library construction, War Library Service provided some 7,000,000 volumes for the military libraries it sponsored

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<sup>47</sup>Theodore W. Koch, Books in the War: The Romance of the War Library Service (Boston: Houghton Mifflin Company, 1919), p. 2.

<sup>48</sup>Ibid., p. 3.

<sup>49</sup>John Jamieson, Books for the Army: The Army Library Service in the Second World War (New York: Columbia University Press, 1950), p. 12.

and for direct distribution to Army and Navy personnel.

Service at posts in the United States was organized by prominent civilian librarians on leave from their positions and operated by paid or volunteer librarians. The library buildings had shelf space for from 10,000 to 15,000 volumes, seating space for 200 men, and in addition to the main library room had living quarters for the librarian on duty. . . . 50

Aided by the Young Men's Christian Association, the Knights of Columbus and the Jewish Welfare Board, the War Library Service established branch libraries and book deposit centers, both in the United States and overseas. The Red Cross operated hospital libraries. The War Library Service, through its overseas headquarters in Paris, coordinated shipments of books from major dispatch points in the United States. After the termination of hostilities, it aided the Army educational program in France and Germany by supplying a professional reference staff and approximately 30,000 textbooks and reference volumes for the American Expeditionary Force University at Beaune, and by issuing substantial collections of library materials to other Army educational centers. 51

In 1921 the Army Library Service, a logical successor to the civilian-directed War Library Service, was formally established as an element of the Adjutant General's Office, in the War Department. Within the continental United States, the Army was at that time divided into six corps areas. A librarian was authorized for each of the corps areas

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<sup>50</sup>Ibid., p. 13. <sup>51</sup>Ibid., p. 14.

and was assigned to the staff of the Education and Recreation officer. The Army then maintained 228 post libraries, including those in the United States, the Philippine Islands, Hawaii and Panama, and they were operated by enlisted men and nonprofessional civilian employees.<sup>52</sup>

According to Jamieson, whose history of military libraries of this period is considered by many to be the definitive work on the subject, the personality and cultural interest of the post commander were frequently the principal determinants of the measure of support given to libraries below the level of the corps area.<sup>53</sup> Because of the obviously erratic pattern in the quality of library resources and services at the post level, Luther L. Dickerson, former War Library Service administrator and after 1919 the War Department Library Specialist, organized traveling libraries as a partial solution to the problem. Initially these consisted of collections of twenty-five volumes of standard works, but they were later enlarged to some sixty volumes, and current, popular books were included. Assembled at the New York Quartermaster Depot, they were dispatched to the corps area librarians, who in turn processed the books and forwarded each of the traveling libraries to four posts in succession. Each post retained the library for ninety days before forwarding it to the next post. The last of the four Army posts added the

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<sup>52</sup>Ibid., p. 15.

<sup>53</sup>Ibid., p. 16.



books to the permanent collection of its library; hence each post could expect to receive four traveling libraries each year, one of which it made a part of its permanent library collection. In the period of the nineteen twenties, when this system was in effect, the post libraries were under the supervision of the post chaplains. Corps area librarians, with limited travel budgets, could accomplish little supervision and guidance, moreover, during the Depression years, the War Department did not hire replacements for the corps area librarians who resigned. Whereas in 1921 the Department had allocated \$94,000 for Army library service, the outlay in 1931 was only \$44,000, of which \$16,000 was for salaries and \$734 for travel. Between 1934 and 1939 the Army spent annually only \$8,000 for the wages of its librarians.<sup>54</sup>

The technical library, like the recreational library, has a World War I heritage. A skeletal organization of technical libraries was established in 1918, when the Air Service, War Department, succeeded in title and function the Aviation Section, Signal Corps.<sup>55</sup> In 1920, under the guidance and direction of the Air Service Library, which was located in Washington, D.C., special aeronautical libraries, consisting

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<sup>54</sup>ibid, pp 15-18

<sup>55</sup>Letter, Harry F. Cook, former Director of Air Force Library Service, November 16, 1968, with enclosed reprint of his article entitled "United States Air Force Library Service," prepared for publication in Encyclopedia of Library and Information Science (New York: Marcel Decker, Incorporated, 1968).

of 50-volume basic collections of reference works, augmented with specialized technical and reference volumes appropriate to the mission of the organization served, were authorized for all Air Service stations <sup>56</sup>

Although the passage of time and events served to erode much of the early interest in the special aeronautical libraries, the concept was revived in 1932, when Brigadier General Oscar Westover, Assistant Chief of the Air Corps, requested and received from the Adjutant General the authority for the Chief of the Air Corps "to establish at each post, camp or station, where Air Corps troops are on duty, an Air Corps technical library. . . ."<sup>57</sup> Westover's plan was to have "at stations that are essentially Air Corps" a technical library housed and maintained as a separate section of the station library, a concept which proved acceptable. A second feature of his proposal, the establishment of separate technical libraries for the benefit of Air Corps troops "at

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<sup>56</sup>Letter, War Department, Office of the Director of the Air Service, file V-1971, April 23, 1920, to Commanding Officer (all Air Service Stations), "Special Aeronautical Libraries," cited by Mary E Stillman, "The United States Air Force Library Service: Its History, Organization and Administration" (unpublished doctoral thesis, University of Illinois, 1966), p. 4

<sup>57</sup>Letter, Brigadier General O. Westover, Assistant Chief of the Air Corps, Office of the Chief of the Air Corps, to the Adjutant General, War Department, July 18, 1932, "Establishment of Technical Libraries at Air Corps Stations and Activities," and 1st Indorsement thereto, August 1, 1932 (copy provided by Harry F. Cook in his letter of November 16, 1968)

stations not essentially Air Corps, " was disapproved by the Adjutant General, since Air Corps control of such technical libraries would have constituted a likely encroachment on the authority and responsibility of the post commanders concerned.<sup>58</sup>

With the general mobilization of 1940, the Army Library Service was administered by the Library Section, Morale Branch, Adjutant General's Office. Plans for the expansion of library service were vague and ill defined--sufficiently so to evoke the genuine concern of the American Library Association. Accordingly, Carl H. Milam, the executive secretary of that organization, and Luther L. Dickerson, who had resigned as War Department Library Specialist in 1924 and was now head of the Indianapolis Public Library, voluntarily assumed the role of consultants to the Morale Branch. Their recommendations were the following: (1) appointment of a chief librarian for the Army, specifically, a civilian librarian of national prominence or a reserve officer with appropriate professional background, "who should hold rank equal to that of the supervisors of the army's educational and recreational programs"; (2) employment of professional civilian librarians at all service command headquarters, as well as at the thirty-three major posts; (3) housing of libraries in separate buildings; (4) centralized purchase of a 4000-volume basic collection for each of the libraries, as

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<sup>58</sup>Ibid.

well as the preparation of a uniform catalog for each such collection; (5) allocation of funds to Army posts as a means of enabling post librarians to supplement their basic collections with an additional thousand volumes of their own selection; (6) purchase of a plentiful assortment of newspaper and periodical subscriptions, music records and films of an educational nature; (7) assignment of competent, specially trained enlisted men as library assistants; (8) cooperative arrangements between post libraries and agencies responsible for educational and military training; (9) provision of the means whereby post librarians would monitor the support of post hospital libraries, even though the hospitals might have commanders other than those commanding the post; (10) arrangements for Army selection and purchase of books on a continuing basis, rather than dependence on public donations, and (11) extension of library service through branch libraries, deposit collections and mobile facilities.<sup>59</sup>

Of the eleven recommendations made, only two basic ones were adopted—the employment of professional librarians at service command headquarters and in post libraries, and the allocation of funds for books, periodicals and equipment. An initial allotment of \$6,400 for books and periodicals and \$880 for equipment was made for each new library, with provision for centralized selection and purchase of the basic collections.

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<sup>59</sup>Jamieson, op. cit., pp. 20-22.

A third recommendation was ultimately accepted in part. Under the urging of the consultants, the Morale Branch reluctantly reconsidered the matter of assigning a chief librarian for the Army. To the objection that library policy was too unimportant to warrant a specialist at War Department headquarters level, the consultants countered with the argument that \$250,000 was soon to be disbursed for the Army libraries, and if such a large expenditure were to be injudiciously administered by an individual or group of individuals who had no specialized knowledge of book selection and purchase, major embarrassment to the Army might ensue when this became public knowledge.<sup>60</sup> The Morale Branch acquiesced, but assigned a professionally qualified "but unknown first lieutenant, Ray L. Trautman, 10 weeks out of library school," rather than a prominent civilian as its chief of the Library Section.<sup>61</sup>

Trautman's principal functions were to obtain funds from Congress and to direct the establishment of libraries. The measure of his success can be inferred from the fact that he received "4 promotions in 5 years to full Colonel (at age 38),"<sup>62</sup> although Jamieson wrote of Trautman's difficulties in establishing "uniform standards of

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<sup>60</sup> Ibid. p. 23

<sup>61</sup> Letter, Ray L. Trautman, Professor of Library Service, School of Library Service, Columbia University, and former Chief of the Library Section, Morale Branch, United States Army, during World War II. January 16, 1969, to the writer, and Jamieson, op cit pp 23-24

<sup>62</sup> Trautman loc cit

supply and service in all areas."<sup>63</sup> In what had formerly been called corps areas but had been given the new designation service commands, there were professional librarians appointed to plan and manage library service within the range of their respective jurisdictions. Each military installation with 5,000 or more men was authorized a library staffed by a professional librarian. Later, this requirement of a complement of 5,000 men was reduced to 2,500 men, and eventually installations with even lower troop strength were provided libraries.<sup>64</sup>

In a major reorganization of the Army in 1942, the War Department formed three distinct headquarters: Army Ground Forces, Army Service Forces and Army Air Forces. Combat units in training in the United States were assigned to the commanding general of Army Ground Forces, all Air Forces units in the United States and some overseas units of the Army Air Forces were placed under the jurisdiction of the commanding general of Army Air Forces, the nine service commands were made the responsibility of the commanding general of Army Service Forces. Commanding generals of overseas theaters of operations held the same command level of authority as their counterparts of Army Ground Forces, Army Services Forces and Army Air Forces, who likewise were responsible to the Army Chief of Staff. The Morale

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<sup>63</sup>Jamieson, op. cit., p. 24.

<sup>64</sup>Stillman, op. cit., pp. 16-17

Branch became the Special Services Division and was subordinate to Headquarters Army Service Forces. Each service command also had a Special Services Division, and each post, a Special Services officer. Special Services officers also were assigned "in all Army Ground Forces and Army Air Forces units of regimental size or larger."<sup>65</sup> Supervision of the post libraries was one of the many duties of the post Special Services officer. In the overseas theaters of operation, either the theater commander or the theater Services Forces commander had a Special Services officer on his staff. The theater Special Services officer was responsible for disseminating reading material to all troops in the theater and for "the provision of library service if he considered it desirable and practicable to provide such service" [italics in the original].<sup>66</sup>

In 1944 the Army Air Forces were given the task of directly supervising the libraries at Army Air Forces installations, heretofore a function of Army Service Forces. This action was prompted by the administrative complexities of coordinating command-level decisions between the Army Service Forces, which "were subdivided into regional commands," and the Army Air Forces, which "were subdivided into functional commands," that is, according to the type of mission to be

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<sup>65</sup>Jamieson, op. cit., p. 8.

<sup>66</sup>Ibid

performed.<sup>67</sup> On April 16, 1945, Harry F. Cook became the first head of the library service of the Army Air Forces, holding the title of Chief Library Unit, Special Service Section, although originally his appointment was to the Information and Education Branch of the Personnel Services Division rather than to Special Services.<sup>68</sup> Thereupon the staff supervision of Special Service activities, including libraries, of the Army Air Forces installations within the continental United States became an accepted responsibility of the Army Air Forces.<sup>69</sup> The year 1946 witnessed the absorption of the field technical libraries by Air Forces Library Service, the central interest of which had previously been the recreation, or general, libraries.<sup>70</sup>

With the establishment of the United States Air Force in July 1947,<sup>71</sup> libraries of the Army Air Forces were transferred to the jurisdiction of the Department of the Air Force.<sup>72</sup> Army Air Forces Regulation 34-5 "Organization and Administration of AAF Libraries,"

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<sup>67</sup>Stillman, op. cit., p. 20.

<sup>68</sup>Letter, Harry F. Cook, former Director of Air Force Library Service, November 16, 1968, to the writer.

<sup>69</sup>Stillman, op. cit., p. 34.

<sup>70</sup>Ibid., pp. 29-30.

<sup>71</sup>Supra, p. 18.

<sup>72</sup>Mary E. Stillman, in her already cited doctoral thesis, notes



was not superseded, however, as the basic directive governing Air Force libraries until May 1951, when the first Air Force Regulation 212-1, "Air Force Library Service," was published.<sup>73</sup> Some cognizance of base library responsibility toward off-duty education is apparent in Army Air Forces Regulation 34-5, which specified as general duties of "AAF installation librarians" the requirements to

- .....
- (3) Assist military personnel in securing maximum morale value from use of books, whether for recreation, information, or study.
  - (4) Formulate and provide a library program for installation activities requiring specialized library services.
  - (5) Publicize, in the library, the base nonmilitary education program and provide information regarding enrollment facilities for interested individuals.<sup>74</sup>

The first histories of the Library Section, Special Services Branch, Personnel Services Division, Directorate of Military Personnel,

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in Chapter III of her study that Army Service Forces continued to operate libraries overseas in behalf of Air Force personnel until November 15, 1949, based on an Air Force assumption that occupation forces were not likely to play a permanent role in the defense plans of the United States, the corollary being that United States military libraries in occupied countries were likely to be temporary. Harry F. Cook, the head of Air Force Library Service during this period, commented in his November 16, 1968, letter to the writer that the "transfer of overseas responsibility for libraries to the AF on Nov. 15, 1949 was due to major changes of Army responsibility to the AF. . . . The library program just went along with the overall change."

<sup>73</sup>The Authority Library Section, Air University Library, Maxwell Air Force Base, Alabama, provided copies of these and other long-superseded directives needed for supporting comments and evaluations regarding policies and practices in Air Force libraries.

<sup>74</sup>Headquarters Army Air Forces, AAF Regulation 34-5, Organization and Administration of AAF Libraries, May 7, 1946, paragraph 9b.

Headquarters United States Air Force, emphasized the statistical totals compiled from the reports of Air Force libraries in the United States and overseas. Such items as total yearly circulation, total number of volumes available to users, distribution of book collections to newly activated organizations and distribution of clothbound and paperbound book kits and magazine sets constitute the substance of these histories. They provide no information about the design or implementation of specific plans for library support of college-level, off-duty education programs. Some interest in this function can be inferred from activities reported in the semiannual history of the Education and Libraries Branch for the period January through June 1955, when there occurred "a series of five educational conferences covering the entire country," sponsored by civilian colleges or universities but organized at the request of the Air Force and coordinated by the Education and Libraries Branch.<sup>75</sup> The National University Extension Association established a committee on Education for Military Personnel in this period, and its membership included the chief of the Education and Libraries Branch, Personnel Services Division.<sup>76</sup>

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<sup>75</sup>Headquarters United States Air Force, Deputy Chief of Staff/Personnel, Directorate of Military Personnel, Personnel Services Division, Education and Libraries Branch, Staff History, January 1, 1955, to June 30, 1955, Vol. II, p. 240.

<sup>76</sup>Ibid., pp. 240-241.

The 1951 edition of Air Force Regulation 212-1 was superseded by editions which appeared successively in 1954, 1958, 1962, and 1965. All of them provided authorization for a library to be established and maintained at each Air Force base for the purpose of serving personnel on duty there and their dependents. The 1962 and 1965 editions provided also for library service to civilians employed on the Air Force installations where base libraries were established.<sup>77</sup> The 1951 and 1954 editions stated specific qualifications for base librarians, such as United States citizenship, successful completion of a library school accredited by the American Library Association, professional competence, "sympathetic understanding of people as well as books," a year of experience in library administration when branch or special library collections were a part of the duties of the position, and a maximum age of forty years at the time of appointment. Provision was made, however, for major air command waiver of these qualifications when the best interests of the service would be promoted by doing so.<sup>78</sup> Allowance of exceptions to the educational requirement is attributable to a provision of Public Law 359, the Veterans' Preference Act of 1944, which

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<sup>77</sup>United States Department of the Air Force, Air Force Regulation 212-1, "Air Force Library Service," January 19, 1962, paragraph 5; March 22, 1965, paragraph 3.

<sup>78</sup>United States Department of the Air Force, Air Force Regulation 212-1, "Air Force Library Service," May 16, 1951, paragraph 15, July 19, 1954, paragraph 16.

stipulated the following:

. . . No minimum education requirement will be prescribed in any civil-service examination except for such scientific, technical, or professional positions the duties of which the Civil Service Commission decides cannot be performed by a person who does not have such education. The Commission shall make a part of its public records its reasons for such decision.<sup>79</sup>

All editions of Air Force Regulation 212-1 devoted attention to minimum standards for base libraries, particularly to the number of volumes in relation to the military personnel authorization of the base. All the standards listed in this directive were essentially quantitative. These standards, as reflected in the 1958 edition of the regulation, are shown in Tables VIII and IX (Appendix C). For a base population of one to five hundred, a minimum adult collection of 1,500 volumes is authorized. Four volumes per capita are authorized for the adult collection with a base population of 501 to 2,000; three volumes per capita for bases with a population of 2,001 to 5,000, three volumes per capita up to 25,000 volumes for bases having a population from 5,001 to 10,000, and two and one-half volumes per capita for those with a population of 10,001 and above. Standards for the juvenile collection and the patients' hospital library are also listed in the directive (Table VIII, Appendix C). Table IX shows the floor space allowance standards for base libraries in 1958. These were related to

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<sup>79</sup>Harry F. Cook, Chapter XII, "Personnel," in Luther H. Evans and others, Federal Departmental Libraries: A Summary Report of a Survey and a Conference (Washington, D. C.: Brookings Institution, 1963), p. 81, citing 58 Stat. 588.

the military personnel authorization, and they ranged from a square footage of 1,500 for bases with a military strength of from 1 to 999 to a square foot area of 11,250 for bases with a military strength authorization of from 15,001 to 20,000.<sup>80</sup>

Table X (Appendix C) is a representation of the 1958 standards for base library staffs. At each of five levels of base population, up to 11,000, only one professional librarian was authorized, staff increases being limited to nonprofessional assistants and clerks. Only at bases having a population above 11,000 were two librarians authorized by the standards of Air Force Regulation 212-1.<sup>81</sup>

Considering the fact that enrollments in college-level, off-duty education programs were never below 82,500 in any year after 1954 (cf. Table I, Appendix C) and the fact that service journals had begun to highlight the off-duty education programs, specific reference to qualitative standards of library services and resources to support these programs would have been helpful. In neither the Headquarters United States Air Force staff histories nor in Air Force regulations pertaining to library services was evidence found of unequivocal commitment to this responsibility. Both the 1962 and the current (1965) editions of Air

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<sup>80</sup>United States Department of the Air Force, Air Force Regulation 212-1, "Air Force Library Service," April 2, 1958, paragraph 9.

<sup>81</sup>Ibid., Attachment 1, paragraph 10.

Force Regulation 212-1 offer essentially the same quantitative standards as to book collection and staff size. Moreover, except for changes in format and an eighty percent increase in the minimum number of volumes per capita for dependent children, the standards show negligible changes from those of 1958, which are depicted in Tables VIII and X.<sup>82</sup> Harry F. Cook, who directed Air Force Library Service from 1945 until his retirement at the end of 1966, commented, in explanation, that "specific programs within overall guidelines were developed locally to meet identifiable needs."<sup>83</sup>

Among the directives examined, a Strategic Air Command supplement to the March 1965 edition of Air Force Regulation 212-1 provided the first clear indication of concern for library support of the off-duty, college programs offered on Air Force installations.<sup>84</sup> It specified that the librarian was to "support the on-base college degree

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<sup>82</sup>United States Department of the Air Force, Air Force Regulation 212-1, "Air Force Library Service," January 19, 1962, paragraph 8 and Attachment 4, Table 3, March 22, 1965, paragraph 8 and Attachment 4, Table 4.

<sup>83</sup>Letter, Harry F. Cook, November 16, 1968, and enclosed note thereto.

<sup>84</sup>Lourell E. Cavin, Command Librarian, Headquarters Strategic Air Command, pointed out in an informal memorandum of July 23, 1968, that Strategic Air Command had issued a number of policy letters, probably as early as 1957 or 1958, in support of the education program, although the file copies were no longer available.

granting program with reference materials, reference service and bibliographies. . . .<sup>85</sup> Still more important as a harbinger of more general support within the Air Force was a draft copy of a portion of the proposed revision of the current Air Force Regulation 212-1, supplied by John L. Cook, Director of United States Air Force Library Service, which contained the following statement

3. Extent of Service. . . . Library support for the Air Force Education Services program and collections adequate to meet the minimum needs of on-base college and university programs is [sic] also included. . . .<sup>86</sup>

The extent of support of these programs has, in practice, been largely a matter of gentlemen's agreements, with the Air Force on the one hand encouraging the establishment of on-base college classes while on the other hand not committing to writing the specific obligation of either party to provide library support for the program. Corroboration of this finding has been obtained not only in interviews with the Director of United States Air Force Library Service,<sup>87</sup> and the Chief

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<sup>85</sup>Headquarters Strategic Air Command, SAC Supplement 1, July 8, 1965, to Air Force Regulation 212-1, "Air Force Library Service," March 22, 1965.

<sup>86</sup>Undated draft of paragraph 3 of proposed revision to Air Force Regulation 212-1, "Air Force Library Service," March 22, 1965, forwarded to the writer by John L. Cook, Director of United States Air Force Library Service, on September 12, 1967.

<sup>87</sup>Statement by John L. Cook, November 1, 1967, personal interview.

of Education Services<sup>88</sup> and the Command Librarian<sup>89</sup> of Aerospace Defense Command, but also through examination of ten contracts in effect between 1966 and 1968 between representative Air Force bases and colleges and universities offering on-base programs. The contract between Vandenberg Air Force Base and the University of Southern California can be considered typical of such contracts, with respect to library support. The closest approach to specificity in this aspect of the academic program appears under "services to be furnished," wherein the students covered by the contract are required to "be registered in the same manner as civilian students" and to "have the same privileges, including use of all facilities normally furnished by the Contractor to all students."<sup>90</sup> If the word facilities is to be construed as referring to library resources, it must be recognized that the University of Southern California and Vandenberg Air Force Base are more than 170 miles apart; hence the matter of library support has

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<sup>88</sup>Statement by Edwin Peterson, Chief, Education Services, Headquarters Aerospace Defense Command (then designated Air Defense Command) September 18, 1967, personal interview.

<sup>89</sup>Statement by Lucia Gordon, Command Librarian, Headquarters Aerospace Defense Command (then designated Air Defense Command) August 8, 1968, personal interview.

<sup>90</sup>Vandenberg Air Force Base, California, Base Procurement Division, Contract Number FO4684-68-C-0133, with the University of Southern California, in effect from January 22, 1968, to June 4, 1968.



not been realistically considered. The presence of an Air Force technical library on a military installation where civilian college courses are taught, as is the case at Vandenberg Air Force Base, does not ordinarily constitute an adequate solution to the problem, for off-duty education program support responsibility generally falls on the base library, not the technical library.<sup>91</sup>

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<sup>91</sup>The Air University Library, Maxwell Air Force Base, Alabama, in June 1968 published a listing entitled "Research Libraries in the Air Force." In it, the Air University distinguished between technical libraries, of which twenty-one were enumerated; academic libraries, of which three were listed; and historical archives, the primary one being at the Air University. The three academic libraries are the Academy Library, United States Air Force Academy, Colorado, which supports the cadets, faculty and staff of the Academy, the Air University Library, which supports the extensive professional education and training programs of officers and enlisted men, and the Air Force Institute of Technology Library, Wright-Patterson Air Force Base, Ohio, which supports the undergraduate and graduate programs of the Air Force Institute of Technology, an accredited, degree-granting institution for selected Air Force officers and civilian employees.

## CHAPTER III

### REVIEW OF THE LITERATURE

The development of a method of evaluating Air Force base library support of college-level educational programs was begun with a review of selected readings on Army and Air Force library service, an examination of evaluative studies relating to two Air Force libraries and a survey of standards and guidelines pertaining to college and university libraries

#### LITERATURE RELATING TO MILITARY LIBRARIES

The most useful account of the history and organizational development of Air Force libraries was found in Stillman's dissertation on the subject. Carefully documented and comprehensively detailed, the study reflects Stillman's ten years' experience in military libraries and her desire for increased public awareness of the contribution of Air Force libraries to the well-being of men and women of the Air Force.<sup>1</sup> She concluded that the quality of library service within any major air command was dependent on:

the location and size of its bases, the extent of its off-base support obligations, its military mission, and the professional philosophy of the command librarian.<sup>2</sup>

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<sup>1</sup>Mary E. Stillman, "The United States Air Force Library Service: Its History, Organization and Administration" (unpublished doctoral thesis, University of Illinois, 1966)

<sup>2</sup>*Ibid.*, pp. 142-143.

Her comment on the role of base libraries in the support of off-duty education, however, is confined essentially to a single page, wherein she notes that "the base library is the source of material for supplementary reading, reports, and term papers," and, at bases which have graduate study centers, "the library is involved in providing academic library support."<sup>3</sup>

Generally acknowledged to be the foremost history of the Army Library Service in World War II, Jamieson's Books for the Army would seem to belong in the collection of almost all military libraries. Aided by a subsidy from the Carnegie Corporation of New York, Jamieson drew on his varied experience as Chief of the Library Section of the War Department Special Services Division, as well as on the resources of War Department records and archival materials, to present a summary of library services within the military forces-- primarily the Army-- between 1940 and 1946.<sup>4</sup> Jamieson's contribution is not only that of a chronicler of events that marked the development of Army Library Service, but it is also that of a perceptive viewer of organizational problems affecting military libraries. Particularly pertinent, even today, is his comment about the relationship of library services and education, which became an issue in 1943, when Special Services Division was separated into two divisions-- the

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<sup>3</sup> Ibid., p. 80

<sup>4</sup> John Jamieson, Books for the Army: The Army Library Service in the Second World War (New York: Columbia University Press, 1950), pp. vii-ix.

Special Services Division and the Information and Education Division, with the Library Section being made a part of the Army Athletic and Recreation Service, Special Services Division:

. . . The reorganization had one harmful effect. The library and education programs were intimately connected at post level. With the Library Section and Education Branch in separate staff divisions in the War Department and in the service command and theater headquarters, the connection was broken on these upper levels. It is impossible for two agencies to maintain close working relationships when they have to deal with each other through official channels: only final decisions are transmitted officially--no "hunches" or tentative suggestions. . . .<sup>5</sup>

A recently expressed point of view on library service organization by the first Chief of the Library Section is also noteworthy:

. . . Organization: Get as high as possible in structure with highest rank of chief. Work out informally on technical level, saving high rank for weighting opinion or in transmitting staff officers' findings.

Libraries should be part of or equal to Education Services. . . . Ideally libraries should enjoy a status where they can serve all yet be independent. In that way they can obtain support from Education. . . . Training, Recreation . . . [italics in the original].<sup>6</sup>

As shown in Table XI (Appendix C), the relationship between the Education Services Branch and the Libraries Section of Headquarters United States Air Force in 1968 also reflected organizational separation. Education Services Branch was an organizational part of the Professional Education Division, which in turn was subordinate to the Directorate for Personnel Training and Education. Libraries

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<sup>5</sup> *Ibid.*, pp. 31-32.

<sup>6</sup> Letter, Ray L. Trautman, Professor of Library Service, School of Library Service, Columbia University, and former Chief of the Library Section, Morale Branch, United States Army, during World War II, January 16, 1969, to the writer.

Section, however, was a part of the Recreation Support and Services Branch which was subordinate to the Special Services Division of the Directorate of Military Personnel.<sup>7</sup> Six years earlier the two functions had been a single staff entity, the Education, Libraries and Community Services Branch of the Personnel Division, Directorate of Military Personnel.<sup>8</sup> In the semiannual history of the latter branch for the first half of 1962, five full pages were devoted to the Libraries Section.<sup>9</sup> In the second half of 1962, four pages were used to record the history of the Libraries Section.<sup>10</sup> During the spring of 1963, Headquarters United States Air Force established a field extension, designated the United States Air Force Personnel Center, at Randolph Air Force Base, Texas, to which the Directorate

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<sup>7</sup>Organizational information was obtained by telephoned interview with John L. Cook, Director of Air Force Library Service, on August 14, 1968, and by telephoned interview with Robert W. Quick, Chief, Education Services, Headquarters United States Air Force, on the same date.

<sup>8</sup>Headquarters United States Air Force, Deputy Chief of Staff/Personnel, Directorate of Military Personnel, Personnel Services Division, Education, Libraries and Community Services Branch, Semiannual History, January 1, 1962, to June 30, 1962, Vol. IV, p. 324.

<sup>9</sup>Ibid., pp. 333-338.

<sup>10</sup>Headquarters United States Air Force, Deputy Chief of Staff/Personnel, Directorate of Military Personnel, Personnel Services Division, Education, Libraries and Community Services Branch, Semiannual History, July 1, 1962, to December 31, 1962, Vol. VI, pp. 28-31.

of Military Personnel was moved.<sup>11</sup> The Professional Education Branch, under the Directorate for Personnel Training and Education, remained in the Washington, D. C., area, whereas the Libraries Section, under Special Services Branch, Personnel Services Division Directorate of Military Personnel, moved to Texas. Table XI reflects the hierarchical disparity between libraries and education as staff functions within Headquarters United States Air Force since the separation. Libraries of the Air Force are represented by a section within a branch, and education is represented by staff offices at branch, division and directorate levels. Table XII (Appendix C), which depicts the organization of the Office of the Assistant Secretary of Defense, Manpower and Reserve Affairs, reflects the fact that there is a Deputy Assistant Secretary for Education within the organizational structure of the Office of the Secretary of Defense, but libraries are not similarly represented.<sup>12</sup>

In contrast to the 1962 staff histories of the Libraries Section, the semiannual history of Special Services Branch for the first half of 1963 contains two and three-fourths pages of information about the Libraries Section. Moreover, that part of the history appears in the report after sections devoted to the following, which are listed in

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<sup>11</sup>United States Department of the Air Force, The Inspector General, United States Air Force, "USAF Personnel Management Command," TIG Brief, XV (May 24, 1963), 5.

<sup>12</sup>United States Department of Defense, Organization chart of the Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs), July 1968.

order of appearance in the history (1) budget, (2) supplies and equipment, (3) regulations, (4) utilities, (5) procurement, (6) open messes, (7) open mess directives, (8) package liquor stores, (9) basketball, (10) boxing, (11) volleyball, (12) judo, (13) wrestling, (14) track and field, (15) weight lifting, (16) badminton, (17) modern pentathlon, (18) bobsled, (19) baseball, (20) gymnastics, (21) skating, (22) 1964 Air Force sports and recreation championships, (23) entertainment and recreation, (24) recreation brochure (25) aero clubs, (26) youth activities and (27) talent contest.<sup>13</sup>

This semiannual history was the most recent one available at the Archives Branch of the Aerospace Studies Institute at the time the research was conducted, the practice being for the Air Force to retain copies at Headquarters level for five years before depositing them in the archives.<sup>14</sup>

The proceedings of the annual Military Librarians Workshop, which began in 1957, were reviewed. The first Workshop endorsed the Air University Periodical Index (since retitled Air University Library Index to Military Periodicals) as a standard bibliographic

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<sup>13</sup>Headquarters United States Air Force, Deputy Chief of Staff/Personnel, Directorate of Military Personnel, Personnel Services Division, Special Services Branch, Semiannual History, January 1, 1963, to June 30, 1963, Vol. I, pp. 200-218.

<sup>14</sup>Statement by Frank C. Myers, Chief, Classification and Research Section, Historical Division, Aerospace Studies Institute, July 17, 1968, personal interview.

tool for military librarians<sup>15</sup> Its value lies in the fact that it provides coverage of "63 English language military and aeronautical periodicals not indexed in readily available commercial indexing services,"<sup>16</sup> and is available without charge to military libraries<sup>17</sup>

The fact that in the present study the Air University Library Index to Military Periodicals was chosen as one of the two basic indexes for all Air Force libraries supporting college-level, off-duty education programs is attributable, at least in part, to the emphasis this index was accorded by the Military Librarians' Workshop

Johnson's study of libraries in a variety of United States professional military educational institutions, undertaken at the request of the Director of the Air University Library in 1956, was examined from the point of view of learning Johnson's method of evaluating military libraries and as a means of acquiring general information on the Air University Library, which was to be included in the present study His procedure was to review the origin, mission and administrative organization of each of the nineteen

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<sup>15</sup> Military Librarians Workshop, Proceedings of the Military Librarians Workshop (Air University Library, Maxwell Air Force Base, Alabama, 1957), Working Paper No. 6, "Indexing of Military Periodicals," p. 2

<sup>16</sup> "Preface," Air University Library Index to Military Periodicals, XIX (January - March, 1968), iii

<sup>17</sup> Air University Library, Air University Library Regulation 5.2 "Air University Library Publishing Policy," June 11, 1963, paragraph 6



schools and eighteen libraries studied<sup>18</sup> Within each library he studied statistical reports, names and locations of nearby library facilities, the collection, as well as acquisition and reference activities<sup>19</sup>

Johnson's consideration of library facilities within reasonable proximity of libraries under study was of pertinence to this dissertation The matter of availability of nearby libraries as a supplement to base library facilities was incorporated in the questionnaire sent to all participants in the present study. The report on the Air University Library, besides detailing its broad mission, indicated Johnson's favorable impression regarding the various aspects of its operation<sup>20</sup>

Bashore and Cowan's 1967 study of the Air Force Institute of Technology Library stressed managerial and operational aspects Mission statements, governing directives, organizational structure, budget, reader services, facilities and equipment, technical processes and personnel management were given special attention<sup>21</sup> Bashore and Cowan, while commenting favorably on the Institute

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<sup>18</sup>Robert K. Johnson, Report on the Air University Library (ACRL Microcard Series No. 82, Air University Library Study of Libraries in Selected Military Educational Institutions, Rochester, New York: University of Rochester Press for the Association of College and Research Libraries, 1957), p. ii.

<sup>19</sup>Ibid . pp. 2-45      <sup>20</sup>Ibid . pp. 48-50

<sup>21</sup>Harry W. Bashore and Robert C. Cowan, "A Descriptive Survey of the AFIT Library" (unpublished master's thesis, Air Force Institute of Technology, 1967)

of Technology Library's basic organizational structure, identified as unsatisfactory the lack of a document defining the specific mission of the library, the absence of a library committee or advisory board, the lack of standardized reporting of statistics within the library system and the delays experienced in the acquisition of books.<sup>22</sup>

The particular value of Bashore and Cowan's thesis to the present study of base library support of off-duty education was the consideration given to reader services during off-duty hours, which was one of the areas singled out for special comment in the analysis of the Air Force Institute of Technology Library system.<sup>23</sup> Their thesis also referred to faculty involvement in book selection and the availability of microform reading equipment.<sup>24</sup> Questionnaires sent to base librarians in the present study contained a section on the amount of reference service available to patrons, including that offered after the normal duty hours of officers and airmen. Questions relating to library holdings of materials identified on instructors' reading lists, as well as a specific inquiry about the availability of microform materials and equipment, also formed a part of the questionnaire used in this study.

## II. LITERATURE RELATING TO CRITERIA

General The commonly acknowledged classic among

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<sup>22</sup>Ibid. , pp 122-139.      <sup>23</sup>Ibid. , pp 27-28.

<sup>24</sup>Ibid. , pp. 69, 123

sources relating to standards for college and university libraries is the work of Wilson and Tauber, published in 1945 and revised in a 1956 edition. Basing their choice of areas for library emphasis essentially on the role of the university, they cite as the principal functions of the university the following: "(1) conservation of knowledge and ideas, (2) teaching, (3) research, (4) publication, (5) extension and service, and (6) interpretation."<sup>25</sup>

Library support of the educational program of the university "beyond its immediate campus boundaries . . . through such means as extension courses . . . ," encompassed in the fifth of the university functions cited by Wilson and Tauber, directly pertained to the present study.<sup>26</sup> Among the items of concern in this dissertation was that of ascertaining in what degree the participating agencies assumed responsibility for providing library resources and services at Air Force installations where colleges and universities offered courses.

The following comment of Wilson and Tauber in regard to library resources needed "for instruction, research, and extension" is instructive:

Whenever a change is made in the curriculum, or a new course, a new staff member, or a new department, school,

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<sup>25</sup>Louis R. Wilson and Maurice F. Tauber, The University Library. The Organization, Administration, and Functions of Academic Libraries (New York: Columbia University Press, 1956), p. 15

<sup>26</sup>Ibid., p. 18.

or institute is added, or an extensive new program of investigation is planned, these changes, additions, and plans almost inevitably involve the use of library materials, whether proper provision is made for them in the library budget or not. Far too frequently such provision is not made in the budget of the new undertaking or of the library and the new undertaking suffers accordingly.<sup>27</sup>

This awareness of the role of financial planning in the development of library resources, emphasized here by Wilson and Tauber, contributed to the inclusion of budget as a library questionnaire item in the present study.

The desire for improved standards in military libraries, particularly technical libraries, is reflected in a study now being conducted under United States Army sponsorship. Divided into three phases, the Army Technical Library Improvement Studies (ATLIS) project 02/001, under civilian contract, features (1) a review of the current literature on library standards and evaluation procedures, (2) a study of data gathering and evaluation and (3) the establishment of criteria.<sup>28</sup> In the first phase of the study, Wessel and Cohrssen define terms and indicate the areas of their investigation in library sciences, including mission, budget, staff, physical arrangement, collections, control of the collection, services and standards. Their compendium of literature relating to the broad field of library criteria served

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<sup>27</sup> Ibid, p. 20

<sup>28</sup> C. J. Wessel and B. A. Cohrssen, Literature Search and State of the Art (Phase I of Criteria for Evaluating the Effectiveness of Library Operations and Services, Washington, D. C.: John I. Thompson and Company, 1967), pp. 1-39.

as a reference source in this dissertation <sup>29</sup>

Special Libraries Association standards. The 1964 standards of the Special Libraries Association have applicability to libraries which generally are limited in purpose, clientele, materials and scope, and which serve a specialized organization. The association offered guidelines on (1) objectives; (2) staff, including the administrative head, the staff librarians, such specialists as literature searchers, translators, abstractors, indexers and information systems specialists and nonprofessional staff, (3) the collection, including subject coverage, size, acquisition policies, organization of materials and provision of catalogs and indexes; (4) services, including reference and bibliographic services, lending of materials, translation, publications, utilization of periodicals, consulting activities and orientation of users, (5) physical facilities, including location of the library, use of space and equipment, storage and areas for technical processes, and (6) budget. An appendix cites standard specifications for stack and other shelf areas, general space requirements and levels of illumination <sup>30</sup> With the exception of the data in the appendix, the standards are primarily qualitative rather than quantitative

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<sup>29</sup>Ibid., pp. 2-8, 13-38 and Appendix A and Appendix B.

<sup>30</sup>Special Libraries Association, Professional Standards Committee, "Objectives and Standards for Special Libraries," Special Libraries, LV (December 1964), 672-680

Although the scope of the Special Libraries Association standards extended beyond the range of the present study, the attention directed to the qualitative aspect of library resources and service in these standards made them relevant to the dissertation.

American Library Association standards Perhaps the most broadly known standards of evaluating college and university libraries are those of the American Library Association, encompassing eight facets of library organization and administration (1) functions, (2) structure and government, (3) budget, (4) staff, (5) collections, (6) physical plant, (7) quality of service and its evaluation and (8) interlibrary cooperation.<sup>31</sup> The Association supports the concept of the college library being "the most important resource of the academic community."<sup>32</sup> Within a clearly defined framework of administrative government, the librarian would be "directly responsible to the president" of the institution served by the library.<sup>33</sup> An advisory committee of faculty members would aid the librarian, as would a "student committee on the library."<sup>34</sup> The American Library Association, furthermore, would have the library budget proportional to "the total budget of the institution of educational and general purposes,"<sup>35</sup> the latter phase, educational and general, having

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<sup>31</sup>American Library Association, Association of College and Research Libraries, "Standards for College Libraries," College and Research Libraries, XX (July, 1959), 274-280

<sup>32</sup>Ibid , p. 274    <sup>33</sup>Ibid.    <sup>34</sup>Ibid    <sup>35</sup>Ibid.

been defined by the United States Office of Education as

operating funds used to defray expenditures for administration, instruction, research, extension services, plant operation and maintenance, and organized activities related to instructional departments <sup>36</sup>

A minimum of "5 per cent of the total educational and general budget" would be allocated to the library <sup>37</sup> Although the staff size would depend on the size and type of institution served, at least three professional librarians, including the head librarian, would be necessary. Amplifying this requirement, the Association defined a professional librarian as one who possesses a graduate library degree <sup>38</sup>

The library would have a strong, properly organized, broadly balanced and readily accessible collection of "books, periodicals, pamphlets, documents, newspapers, maps" and various microforms sufficient to meet "the full curricular needs of the undergraduate students" while also satisfying the requirements of graduate students "in each field in which the institution offers the Master's degree," and assisting the faculty in professional growth <sup>39</sup> A current reference collection of "authoritative works and bibliographies in all major fields of knowledge," not

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<sup>36</sup>Ibid Although the article does not contain a reference to the specific publication of the United States Office of Education from which the definition was derived, a similar definition appeared in United States Office of Education, Library Statistics of Colleges and Universities, 1963-64: Institutional Data (Washington: Government Printing Office, 1965), p. 7, and it presumably appeared in earlier editions of the publication

<sup>37</sup>Ibid.      <sup>38</sup>Ibid.      <sup>39</sup>Ibid

merely those comprising the curriculum, would be a central need <sup>40</sup>  
 The size of the collection, like that of the staff, would be contingent  
 on the size, type and objectives of the institution. A minimum  
 collection of 50,000 volumes would be considered an essential  
 requirement. The following formula would afford the librarian a  
 set of bench marks for building the collection:

up to 600 students, 50,000 volumes; for every additional  
 200 students, 10,000 volumes. Part-time and extension  
 students would be equated into full-time figures for the purpose  
 of such computations. <sup>41</sup>

Full-time enrollment equivalency may be established "by dividing  
 the total student-credit-hours by the normal individual load of  
 credit hours per year." <sup>42</sup> Films, recordings and other audiovisual  
 materials would also fall within the responsibility of the library in  
 the event no other agency of the institution were assigned this  
 function. <sup>43</sup>

A comfortable, centrally located, adequately illuminated  
 library, with seating accommodations for "at least one-third of the  
 student body," and with provision for various reader services as  
 well as for future expansion, would house the collection. <sup>44</sup> The

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<sup>40</sup>Ibid , p 277    <sup>41</sup>Ibid . , p 278

<sup>42</sup>Robert E. Mahn, A Glossary of Terms Used by Registrars  
 and Admissions Officers (prepared for the American Association of  
 Collegiate Registrars and Admissions Officers, n p , 1956), p. 29

<sup>43</sup>American Library Association, Association of College and  
 Research Libraries, loc cit.

<sup>44</sup>Ibid , pp 278-279



staff members would have work areas of "at least 125 square feet of floor space per person," and a staff lounge equipped with basic kitchen facilities would be desirable.<sup>45</sup> Reading areas would feature tables, carrels, individual desks and some lounge chairs. For each reader table space of three feet by two feet would be available.

Statistics, surveys and other tools of evaluation would be used to gauge the quality of library resources and services. Arrangements for cooperative undertakings and administrative collaboration between the college library and the "other interested libraries in the same community, region, state, and in the nation" would be noteworthy characteristics of the management of the routine operations of the college library.<sup>46</sup>

The aforementioned standards of the American Library Association are generally conceded to be the point of departure for evaluators of academic programs of colleges and universities insofar as the libraries supporting such programs are concerned. Of the eight facets forming the core of the standards, the staff, the budget, the collection, the quality of service and interlibrary cooperation were reflected in the library questionnaire developed for use in the present study.

Prompted by evidence of widespread interest being generated by a variety of agencies, including the United States Congress, in university extension programs and their library affiliates, the

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<sup>45</sup>Ibid., p. 279.    <sup>46</sup>Ibid.

American Library Association decided to move beyond its basic standards <sup>47</sup> Public Law 89-329, the Higher Education Act of 1965, had enabled the Commissioner of Education to make grants to strengthen community service programs, including university extension activities and the library branches organized by the universities at their off-campus education centers. <sup>48</sup>

In July 1966 the Board of Directors of the Association of College and Research Libraries, a division of the American Library Association, approved the "Guidelines for Library Service to Extension Students" the underlying philosophy of which is seen in an introductory paragraph

The library experience in higher education, at both the undergraduate and graduate levels, is an important aspect of a person's total education. The library is an extension of the classroom and, as such, has a recognized teaching function. . . . The librarian, with his professional competence and breadth of subject background, introduces the student firsthand to the tools needed in his research. . . . <sup>49</sup>

Noting that the student who pursues off-campus courses is frequently at a pronounced disadvantage, the Association of College and Research Libraries advanced the view that library resources for

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<sup>47</sup>Norman E. Tanis, "The Preparation of the Guidelines," ALA Bulletin LXI (January, 1967), 54.

<sup>48</sup>Ibid, citing 79 Stat. 1219 (1965), 20 U.S.C. secs. 1001 and 1002 (Supp. II, 1967), and 79 Stat. 1224 (1965), 20 U.S.C. secs. 1021 and 1022 (Supp. II, 1967).

<sup>49</sup>American Library Association, Association of College and Research Libraries, "Guidelines for Library Services to Extension Students," ALA Bulletin LXI (January, 1967), 51.

extension courses ought to be as significant "to the successful conduct of the course as would be the case for the same course being taught in the regular university program."<sup>50</sup> In considering the formulation of guidelines, the Association made four basic assumptions: (1) that there would be a continuing requirement for university classes to be offered at locations beyond convenient commuting distance from the university, (2) that university desires and student expectations would indicate no diminution of quality in the academic offering of the off-campus program vis-à-vis that of the university campus, (3) that library resources supporting off-campus courses would be no less essential than those designed to support corresponding courses taught on the main campus, and (4) that "the ratio of graduate courses to undergraduate courses taught for credit through extension, which is already high, will increase."<sup>51</sup>

With these assumptions duly considered, the Association issued six guidelines. (1) Library services for extension programs should be regularly financed, whether in the form of a branch library budget independently administered or in the form of a systematic infusion of funds from the university library. (2) Specific responsibility for library resources and services supporting extension programs should be assigned to a professional librarian, either on full-time duty at a separate library facility or

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<sup>50</sup> Ibid    <sup>51</sup> Ibid , p 52

on a part-time basis. As specifically noted, however,

... this person should be in close touch with the extension division staff and instructors in the field and should be kept informed of immediate and long-range plans for courses requiring library materials.<sup>52</sup>

(3) Prior to approval of the teaching of any extension course, "the appropriate officer in the extension division, the instructor and the librarian" responsible for extension library resources and services "should consider jointly" the course requirements that involve library support and the degree of availability of such library support "locally or through the university library."<sup>53</sup> Such timely action would provide opportunity for investigating interlibrary loan of resources.

(4) Graduate-level courses require special attention to library resources:

The dean should require a statement from the librarian and the instructor indicating the extent of available library resources to support any graduate course under consideration and giving their opinion regarding their adequacy.<sup>54</sup>

(5) Students enrolled in extension courses should be encouraged and, where practicable, required to use the university library. Students attending evening classes on the university campus should be accorded the same privileges, and should have the same requirements, as regular day students. "The library should be open late enough in the evening to accommodate the evening students" at the conclusion of their classes, and the instructor should ensure that students are instructed in specialized use of library resources.<sup>55</sup> (6) Necessary

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<sup>52</sup>Ibid.    <sup>53</sup>Ibid. , pp 52-53.    <sup>54</sup>Ibid. , p. 53    <sup>55</sup>Ibid

journals and indexes should be made available to extension course students regardless of the difficulties entailed in providing them.<sup>56</sup>

The keystone of these guidelines is coordination of library support by the off-campus library staff and the university representatives responsible for the instructional program. The basic procedure used in this dissertation features evaluation of library resources and services which bear a direct relationship to the curricular offering and the stated requirements and recommendations of the instructional staff. Moreover, the guidelines reenforce an underlying concept of the study, namely, the essentiality of library service as a basic need of students enrolled in college courses taught at locations distant from the home campus of the institution which conducts such an educational program.

Clapp and Jordan criteria Nearly two years before the publication of the American Library Association "Guidelines for Library Services to Extension Students," Verner W. Clapp and Robert T. Jordan, of the Council on Library Resources, Incorporated, Washington, D. C., lamenting the practice of placing undue emphasis on the total number of volumes in an academic library collection as the touchstone of its adequacy, suggested a different approach. They pointed out that such variables as the size, interests and composition of the student body and the faculty, the curriculum, instructional patterns, geography of the campus, as well as the prevailing

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<sup>56</sup>Ibid

intellectual climate, were the compelling factors in deciding the appropriate size of the collection.<sup>57</sup> Table XIII (Appendix C) is a representation of the formula proposed by Clapp and Jordan. It combined quantity and quality in a conceptual relationship, while providing for the expansion of the curriculum, the faculty and the student body.

To a basic undergraduate library collection of 35,000 book titles (42,000 volumes), 250 periodical titles (3,750 volumes) and 5,000 volumes of government documents, or a total basic collection of 50,750 volumes, Clapp and Jordan recommended incremental increases in book titles, periodical titles and government documents for each faculty member and for each student, as well as for each field of undergraduate concentration and each field of graduate study.<sup>58</sup>

The concept of relating the required resources directly to the curricular offering, even though more consideration was given to quantitative than to qualitative measures of excellence, was of importance to this dissertation, and it is reflected in the procedure used for evaluating base library support of off-duty education. Specifically, library book collections evaluated in this study were considered (1) from the standpoint of their being representative of the required and recommended reading of instructors and (2) from

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<sup>57</sup>Verner W. Clapp and Robert T. Jordan, "Quantitative Criteria for Adequacy of Academic Library Collections," College and Research Libraries, XXVI (September, 1965), 371-373.

<sup>58</sup>Ibid., p. 374.

the aspect of their comprehensiveness and currency in the subject fields encompassed by the curricular offering. Moreover, the evaluation procedure used in the study provided for separate, and higher, standards for libraries supporting graduate programs, in comparison with those supporting only undergraduate programs.

The Hirsch method of evaluating book collections. Rudolph Hirsch, of the University of Pennsylvania Library, suggests a combination of the following four methods for the most effective system of evaluating book collections: (1) the impressionistic method, which involves a survey conducted by a group of qualified individuals (not necessarily librarians or teachers) "who examine the collection in terms of the policies and purposes of the library", (2) the use of check lists, preferably ones that have been tailored to the special requirements of the institution served, (3) evaluation of the use of the collection, as determined by circulation figures applicable to particular fields and specific types of materials, and (4) the measurement of expenditures for the collection, either by classes of library materials or for the collection as a whole, during specified periods of time, and comparing the data with those of other institutions.<sup>59</sup> Hirsch adds that the expenditures should be related possibly "to total size of the collection, annual additions,

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<sup>59</sup>Rudolph Hirsch, "Evaluation of Book Collections," in Wayne S. Yenawine (ed.), Library Evaluation (Syracuse, N. Y.: Syracuse University Press, 1959), pp. 13-18.

percentage of acquisition expenditures" within the total budget of the institution<sup>60</sup>

The idea of using special check lists related to the particular requirements occasioned by the curriculum of the institution served by the library, as suggested by Hirsch, had pertinence for the current study of base libraries. The use of instructors' reading lists as part of the basis of judging the collections of base libraries exemplifies this concept. This procedure is detailed in Chapter IV.

Accreditation association standards Each of the six regional accreditation associations offers specific guidance to its evaluation committees in regard to libraries. The Middle States Association of Colleges and Secondary Schools, while taking cognizance of the "Standards for College Libraries," seeks a qualitative as well as quantitative assessment.

We do not endorse in any formal fashion the standards and guidelines of the American Library Association. We are aware of them, of course, and so are our evaluators, but we warn the evaluators against resting too confidently in the ALA quantitative standards and specific requirements.<sup>61</sup>

In its guidelines for evaluating college libraries, the Middle States Association advocates judging each library "in its own setting rather than by comparison to general norms," and stresses the

<sup>60</sup> Ibid., p. 16

<sup>61</sup> Letter, F. Taylor Jones, Executive Secretary, Commission on Institutions of Higher Education, Middle States Association of Colleges and Secondary Schools, October 3, 1967, to the writer



importance of considering the mission of the institution served<sup>62</sup>  
Particular attention is given to the qualifications of the library  
director and to his competence as an administrator, but the major  
emphasis is reserved for the collection

Clearly the emphasis should be on the  
appropriateness of the collection for the instructional  
and research programs of the students and faculty, its  
adequacy in breadth and depth, and variety to stimulate  
both students and faculty, its accessibility, including  
proper cataloging, the competence and interest of the  
staff, and above all what happens in the reading and  
reference rooms<sup>63</sup>

It is this concern for the quality of the collection that has  
applicability for the present study of base library support of off-  
duty education programs.

Committee members of the New England Association of  
Colleges and Secondary Schools "by and large take into  
consideration the standards and guidelines of the American Library  
Association."<sup>64</sup> The New England Association, in its standards for  
membership, cites the importance of the quality of the library "and

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<sup>62</sup> Middle States Association of Colleges and Secondary  
Schools, Commission on Institutions of Higher Education, Document  
No. 4 81, "Evaluating the Library: Suggestions for the Use of  
Faculties and Evaluation Teams," October 1967, p. 1

<sup>63</sup> Ibid., p. 2

<sup>64</sup> Letter, Ralph A. Burns, Director of Evaluation,  
Commission on Institutions of Higher Education, New England  
Association of Colleges and Secondary Schools, Inc., October  
16, 1967, to the writer

the degree to which the library is used by students and faculty . . .<sup>65</sup>

The professional staff, the capacity of the library "to support all parts of the curriculum," and faculty participation in building the library collection are concerns of the Association.<sup>66</sup> The concept of a curriculum-oriented collection, sustained by faculty involvement in its choice, underlies the procedure used in this thesis.

The North Central Association of Colleges and Secondary Schools uses as guidelines the standards of the American Library Association, "although it has not adopted them as standards of the North Central Association."<sup>67</sup> The North Central Association does indicate its interest in library support of the educational program, and its desire that the library facilities be used. Six principal aspects of the library are highlighted: (1) books and periodicals, (2) usage, (3) the staff, (4) relationships between the librarians and the faculty, (5) budget, and (6) relationship to other libraries.<sup>68</sup> The North Central Association assigns greater importance to "the

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<sup>65</sup>New England Association of Colleges and Secondary Schools, Incorporated, Commission on Institutions of Higher Education, Standards for Membership Institutions of Higher Education (Boston: New England Association of Colleges and Secondary Schools, 1966), p. 4.

<sup>66</sup>Ibid.

<sup>67</sup>Letter, Joseph J. Semrow, Assistant Secretary, Commission on Colleges and Universities, North Central Association of Colleges and Secondary Schools, October 4, 1967, to the writer.

<sup>68</sup>North Central Association of Colleges and Secondary Schools, Commission on Colleges and Universities, Guide for the Evaluation of Institutions of Higher Learning (Chicago: North Central Association of Colleges and Secondary Schools, 1966), pp. 6-7.

extent to which the collection accurately reflects the needs of the institution as defined by its educational task" than to mere numbers of items in the collection.<sup>69</sup> This consideration of the North Central Association was likewise a central aspect of the evaluation procedure adopted in this study. Noteworthy, too, is the suggestion that interlibrary "borrowing for upper divisional or graduate students and faculty should be easily available."<sup>70</sup> Provision of this service for undergraduate students is not specifically cited in the standards or guidelines of the other regional associations whose publications were examined, although the evaluation guide of the Middle States Association of Colleges and Secondary Schools does ask the following question:

Are interlibrary loans and the resources of other nearby collections being used advantageously, yet not as a substitute for this library's proper development?<sup>71</sup>

The questionnaire used in the present study reflects recognition of the value of interlibrary loan resources.

The North Central Association guide does not state that the library staff members need to hold graduate degrees from accredited library schools. It stipulates only that they "should have professional training in the field of library science," that they should be "regarded as professional persons who play an important part in the educational program," and that they should "hold faculty

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<sup>69</sup>Ibid , p 6      <sup>70</sup>Ibid , p 7

<sup>71</sup>Middle States Association of Colleges and Secondary Schools loc cit

status."<sup>72</sup> The first two of these stipulations provided part of the rationale for the standard of professional background established for base librarians in the procedure of this thesis, presented in detail in Chapter IV. The North Central Association does not cite a specific percentage of the educational and general budget that should be considered the minimum allotted to the library.<sup>73</sup>

The Northwest Association of Secondary and Higher Schools does not rely on "specific quantitative standards" of the American Library Association.<sup>74</sup> Its manual, however, leaves little doubt as to the significance it attaches to the library.

The library is a vital instrument of instruction. It serves as an indispensable agent not only in general education but also in the cultural development of students, faculty, and the community it serves.<sup>75</sup>

Like the other regional organizations involved in accreditation, the Southern Association of Colleges and Schools accords some consideration to the American Library Association.

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<sup>72</sup>North Central Association of Colleges and Secondary Schools. loc cit

<sup>73</sup>Ibid

<sup>74</sup>Letter, James F. Bemis, Executive Director, Commission on Higher Schools, Northwest Association of Secondary and Higher Schools, October 10, 1967, to the writer.

<sup>75</sup>Northwest Association of Secondary and Higher Schools, Commission on Higher Schools, Manual of Standards and Guide for Self-Study for Accreditation of Higher Schools (Seattle: Washington Northwest Association of Secondary and Higher Schools, 1966), pp 12-13.

guidelines.<sup>76</sup> The opening sentence of its own standard on libraries reflects the strength of its interest:

The library is a vital instrument of instruction, not only in general education but also in the cultural development of students and faculty.<sup>77</sup>

In addition to its position that the collection "should, by quality, size, and nature, support and stimulate the entire educational program," the Southern Association recommends that Library Statistics of Colleges and Universities Institutional Data, a publication of the United States Office of Education, be used as a supplemental reference.

In using this reference, institutional authorities should consider it a serious danger signal if the library regularly falls in the lowest quarter of any of the categories analyzed.<sup>78</sup>

The 1965 edition of the aforementioned publication provided information on 1,663 institutions, including enrollment figures, "data on library collection," "personnel in full-time equivalents," "operating expenditures in dollars," staff salaries, hours of library operation per week, square footage and expenditure ratios<sup>79</sup> Of

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<sup>76</sup>Letter, Charles B. Vail, Acting Executive Secretary, Commission on Colleges, Southern Association of Colleges and Schools, October 18, 1967, to the writer.

<sup>77</sup>Southern Association of Colleges and Schools, Standards of the College Delegate Assembly of the Southern Association of Colleges and Schools (Atlanta: Southern Association of Colleges and Schools, 1956), p. 17

<sup>78</sup>Ibid.

<sup>79</sup>United States Office of Education, Library Statistics of Colleges and Universities, 1963-64: Institutional Data (Washington: Government Printing Office, 1965), pp. 8-9, 62-63 and 132-133

these elements, the collection, the staff and hours of library operation each week were of direct significance in the present study. The Southern Association, in considering hours of operation, suggests a minimum of sixty hours per week for a four-year college and eighty hours per week for a university.<sup>80</sup>

The Western Association of Schools and Colleges and the California State Board of Education have published jointly a booklet of eleven accreditation schedules.<sup>81</sup> Schedule I, which pertains specifically to the library, poses the following question:

Is the collection of books, periodicals (current and back numbers) and other education materials large enough and well enough selected to meet the needs of faculty and students in the instructional programs which are being offered?<sup>82</sup>

The booklet contains an affirmation that "the library lies at the heart of a college or university," and that its effectiveness "is essential to both faculty and students."<sup>83</sup> The schedule makes reference to the American Library Association "Standards for College Libraries" and indicates that a report on the library should be based on these standards.<sup>84</sup>

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<sup>80</sup>Southern Association of Colleges and Schools, op. cit., p 18

<sup>81</sup>Western Association of Schools and Colleges, Accrediting Commission for Senior Colleges and Universities, and California Board of Education, Committee on Accreditation, Guide for the Evaluation of Colleges and Universities (n. p., 1967)

<sup>82</sup>Ibid., p 10    <sup>83</sup>Ibid.    <sup>84</sup>Ibid.

Besides the standards suggested by the six regional accreditation associations, evaluative guidelines of the National Council for Accreditation of Teacher Education were reviewed. As pointed out in the Council standards, the requesting institution must meet the following criteria to qualify for evaluation by the Council: (1) it must be accredited by its regional accrediting association at the level for which Council accreditation is requested, and it must be accredited by "the appropriate state department of education for the level and categories requested"; (2) it must be a nonprofit institution which offers at least four years of "college work leading to a bachelor's degree"; and (3) it must offer a four-year program for the preparation of either elementary school teachers or secondary school teachers, or a program of graduate work or "advanced professional programs for school personnel."<sup>85</sup> As noted by the Associate Director of the organization:

The National Council for the Accreditation of Teacher Education through its committees and visiting teams reflects endorsement of the standards and guidelines of the American Library Association in evaluating the over-all strength of libraries.<sup>86</sup>

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<sup>85</sup>National Council for Accreditation of Teacher Education, Standards for Accreditation of Teacher Education (Washington, D C: National Council for Accreditation of Teacher Education, 1960), p 1

<sup>86</sup>Letter, J Andrew Holley, Associate Director, National Council for Accreditation of Teacher Education, October 30, 1967, to the writer

The Council is concerned with audiovisual resources, student use of the library and its resources, the size of the collection, holdings in the field of professional education, a listing of titles of the library's periodicals that are named in Education Index, the quality of special libraries established to support education programs and the proportion of the library budget devoted to books and periodicals in the field of professional teacher education.<sup>87</sup>

Although the Council's interest is specialized, its particular consideration of periodicals as a resource for evaluative review is germane to the procedure used in this dissertation. Each Air Force base librarian who participated in this study was asked to indicate whether the periodical collection of his library included the journals listed by instructors as required or recommended reading in the off-duty education programs offered on the base.

### III. CONCEPTS DERIVED FROM THE REVIEW OF THE LITERATURE

The review of the literature relating to military libraries served to underscore the concept of a logical relationship between libraries and education programs, and, as a corollary, the principle that in a military organizational structure library service and education are functionally related elements. The importance

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<sup>87</sup> National Council for Accreditation of Teacher Education, Guide for Preparing Institutional Report for Accreditation Evaluation (Washington, D. C.: National Council for Accreditation of Teacher Education, 1967), pp. 17-18.



of the Air University Library Index to Military Periodicals as a bibliographic aid in military libraries was affirmed through this review, as was the value of having available the resources of neighboring libraries. The desirability of providing library reference service during off-duty was also attested in the literature pertaining to military libraries.

The literature relating to criteria illuminated the concept of coordination between librarians and planners of academic programs as a basic requirement. Related to this concept was the recognition of the need for an adequate financial foundation to ensure library support of education programs. The validity of concern for qualitative as well as quantitative standards with respect to library resources and service was derived from reading the literature relating to criteria. The essentiality of library service as an aspect of educational programs conducted at locations distant from the home campus of the institution responsible for such programs was another concept found in the literature. A basic premise in this study was that there should exist a fundamental relationship between library resources and the curricular offering of any college or university, a principle which the literature on criteria helped to establish.

Additional tenets derived through this review of the literature were the following: (1) that the standards used in evaluating library collections should reflect recognition of the need for a higher level of resources for the support of graduate programs than for the

support of undergraduate programs; (2) that check lists can be useful in assessing a library collection in terms of its appropriateness to the curriculum of the institution served by the library; (3) that an adequate library collection is a basic requisite for a college-level educational program; (4) that periodical literature is an integral part of the collection of a library which supports an academic program of undergraduate or graduate level.

## CHAPTER IV

### PROCEDURES

The steps used in this survey to evaluate Air Force base libraries consisted of (1) identifying the population to be surveyed, (2) obtaining required authorizations, (3) developing a procedure acceptable to professional representatives in the field of interest, (4) writing to individuals and agencies directly involved, in order to obtain preliminary data for questionnaires, (5) testing the procedure by means of a pilot study, (6) preparing and dispatching questionnaires to participants in the survey, (7) evaluating the returned questionnaires, (8) verifying questionnaire entries by visits to selected bases, (9) analyzing the results of the survey and (10) formulating conclusions and recommendations.

#### I. IDENTIFYING THE POPULATION

Through the use of Headquarters United States Air Force letter of May 1967, "Major Post-Secondary Program Opportunities," as a source of information about Air Force bases which offer college-level off-duty education programs, identification was made of the installations within the continental United States which met the criteria of the study. Of the 115 Air Force bases listed, only 79 made available, on their

sites, courses of study leading to baccalaureate or master's degrees under the auspices of cooperating civilian colleges and universities.<sup>1</sup>

Because of the writer's affiliation with the United States Air Force Academy Library, and the possible susceptibility of the study to bias as a result, the Academy Library was eliminated from consideration. The five Air Force Systems Command bases otherwise eligible to participate were dropped from the list because of a letter from the headquarters of that command, declining to sanction the survey because of the already heavy commitments of its base education services and base library personnel.<sup>2</sup> The Systems Command bases affected by this action were Eglin Air Force Base, Florida; Hanscom Field, Massachusetts; Holloman Air Force Base, New Mexico; Kirtland Air Force Base, New Mexico; and Patrick Air Force Base, Florida. Some general information about the libraries of these bases was obtained from Headquarters United States Air Force, and it is recorded in Appendix G. Two Strategic Air Command installations, Dow Air Force Base,

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<sup>1</sup>Letter, Colonel William G. Barton, Directorate for Personnel and Education (AFPTRE), Headquarters United States Air Force, to the major air commands and separate operating agencies, May 5, 1967, "Major Post-Secondary Program Opportunities," and Attachments 1 and 2 thereto.

<sup>2</sup>1st Indorsement, Colonel Omer L. Cox, Director of Personnel Programs, Headquarters Air Force Systems Command, to United States Air Force Academy Library (DFSLEB) letters of September 13 and September 22, 1967, "Survey of Base Libraries," September 27, 1967.

Maine, and Glasgow Air Force Base, Montana, were excluded because of their scheduled inactivation.<sup>3</sup> Table XIV (Appendix D) contains a listing of the participating installations, by major air command or separate operating agency. The list identifies the twelve Aerospace Defense Command bases, three Air Force Logistics Command bases, four Air Training Command bases, the Air University installation, two Headquarters Command bases, four Military Airlift Command bases, twenty-eight Strategic Air Command bases, sixteen Tactical Air Command bases and one United States Air Force Security Service base included in the study.

## II. OBTAINING REQUIRED AUTHORIZATIONS

On the basis of approvals received from Robert W. Quick, Chief of Education Services, Headquarters United States Air Force, and John L. Cook, Director, United States Air Force Library Service, the survey of seventy-one base libraries was undertaken.<sup>4</sup> Their concurrence augmented by assurances of support within the major air commands.

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<sup>3</sup>Letter, Robert C. Rodrick, Deputy Chief, Education Division, Directorate of Personnel Services, Headquarters Strategic Air Command November 14, 1967, to the writer.

<sup>4</sup>Letter, Robert W. Quick, Chief, Education Service, Headquarters United States Air Force, February 8, 1967, to the writer; and Letter, John L. Cook, Director, United States Air Force Library Service, September 12, 1967, to the writer.

obtained through the cooperation and assistance of Colonel George V. Fagan, Director of the United States Air Force Academy Library, helped establish the working relationships that facilitated the study.

### III. DEVELOPING THE PROCEDURE

The close relationship that commonly exists between academic libraries and the programs of education supported by them led to a dual investigative procedure: (1) an examination of educational programs offered on the participating Air Force bases and (2) a survey of base library support of such programs. Copies of the dissertation proposal, incorporating this dual concept and detailing both the substance of the questionnaire that would be sent to Air Force base librarians and the formula for evaluating the completed questionnaire, were given to the following librarians for their review and recommendations: John L.

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<sup>5</sup>Letter, Colonel George V. Fagan, Professor of History and Director of the Library, United States Air Force Academy, Colorado, to Lucia Gordon, Command Librarian, Air Defense Command; A. Bianco, Command Library Services Officer, Air Force Logistics Command; Evelyn Branstetter, Command Librarian, Air Force Systems Command; Robert W. Severance, Director, Air University Library; William J. Nesbitt, Command Librarian, Continental Air Command; Hugh Redden, Command Library Services Officer, Military Airlift Command; Elizabeth Fuller, Command Librarian, Tactical Air Command; Loutrell Cavin, Command Librarian, Strategic Air Command; B. Louise Nabors, Command Librarian, Air Training Command, Command Librarian, United States Air Force Security Service; and Command Library Services Officer, Headquarters Command, United States Air Force, September 21, 1967, "Assistance in Survey."

Cook, Chief, Air Force Library Service, whose familiarity with Air Force libraries was based not only on his present position but also on his extensive experience in Air Force libraries, particularly that as Director of Libraries, United States Air Force Institute of Technology, one of the major academic libraries of the Air Force,<sup>6</sup>Dale K. Carrison, Assistant Director, Graduate School of Librarianship, University of Denver (now Chairman, Library Science Department, Mankato State College, Mankato, Minnesota), whose experience included that of a periodicals librarian in addition to service as an instructor of library science at the university level;<sup>7</sup> Don S. Culbertson, Research and Development Librarian, Colorado State University Library (now Executive Secretary, Information Science and Automation Division, American Library Association), whose interest and published writings reflected concern for library management,<sup>8</sup> Donald J. Barrett, Chief, Public Services Division, United States Air Force Academy Library, whose

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<sup>6</sup>Who's Who in Library Service: A Biographical Directory of Professional Librarians in the United States and Canada (Hamden, Connecticut: Shoe String Press, 1966), p. 130. and American Library Directory. A Classified List of Libraries in the United States and Canada, with Personnel and Statistical Data . . . (New York: R. R. Bowker Company, 1967), p. 887.

<sup>7</sup>Who's Who in Library Service: A Biographical Directory of Professional Librarians in the United States and Canada (Hamden, Connecticut: Shoe String Press, 1966), p. 103.

<sup>8</sup>Ibid., p. 145.

more than ten years' experience in reader services at the undergraduate level could be of assistance in reviewing criteria for evaluating reference collections, and Alice C. Hayes, Librarian, Community Library, United States Air Force Academy, whose background included eight years as an Air Force base librarian, in addition to more than ten years' experience on the staff of the Air Force Academy Library, and who was therefore in a position to offer counsel on the practical aspects and general limitations of base library operations.<sup>9</sup>

As a result of the evaluative comments of these reviewers, several adjustments were made in the original procedure. Libraries supporting graduate programs were added to the group to be evaluated. Enrollment figures of the fall term of 1967 were utilized in identifying the principal subject areas which the library collections should represent. The unabridged edition of Readers' Guide to Periodical Literature, which indexed one hundred fifty-nine periodicals, was selected instead of the abridged edition, which indexed only forty periodicals as a basic index for libraries surveyed.<sup>10</sup> The term current, as

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<sup>9</sup>"Professional Staff - USAF Academy Library" (unpublished multilithed summary of the education and experience of the members of the professional staff of the United States Air Force Academy Library, compiled by the Administration Section of the Academy Library), January 1968.

<sup>10</sup>"List of Periodicals Indexed," Readers' Guide to Periodical Literature, LXVIII (May 10, 1968), iii-vi, and Cataloging and Indexing Services (New York, H. W. Wilson Company, 1965), pp. 4-5.



applied to books was established as being descriptive of books having a copyright date of 1962 or later, inasmuch as this would reflect a period not exceeding five years at the time of the study. Another suggestion adopted as a result of reviewers' comments was that of including a definition of the term professional librarian in the questionnaire sent to base libraries. Although previously considered as a result of reading the literature, two other ideas advanced by reviewers were also adopted: (1) that professional reference service offered after normal duty hours be given particular consideration in the evaluation of libraries, and (2) that allowance in the evaluation formula be made for the existence of available library resources other than those of the base library.

The following additional suggestions of reviewers were also incorporated in the procedure: (1) that provision be made for follow-up action in the event of lack of response from a library, (2) that provision be made for respondents to obtain clarification of questionnaire items if required and (3) that arrangements be made to apprise participants of the results. Military circuit telephone communication with command librarians responsible for monitoring base libraries was used for expediting response from base libraries when required. Similar telephone facilities were used in clarifying questionnaire items. Arrangements were made for supplying participants with copies of the results of the study, although the identity of individual libraries was disclosed only to the individual base librarians concerned and to the respective

command librarian having jurisdiction. Reports of findings cited only questionnaire numbers rather than the corresponding Air Force base names.

On September 22, 1967, letters of instruction were sent to the directors of education services of the major air commands which were to participate in the study. The letters made reference to Headquarters United States Air Force letter of May 5, 1967, "Major Post-Secondary Program Opportunities."<sup>11</sup> The instructions stated that questionnaires and related materials being returned to the Air Force Academy Library by base education services officers, in regard to this survey, should be routed through the office of the director of education services of the major air command concerned. The purpose of this instruction was to adhere to proper command channels for all written communication, and to ensure that the base education services officers responded promptly to the requirements of their phase of the study. The major air command directors of education services, like the base-level education officials involved, are Department of the Air Force Civil Service employees. Although the relationship between the upper echelon and lower echelon is that of one staff official to another, rather than that of a commander to a subordinate, specialized functions of this nature are routinely performed between different levels of headquarters. In effect, the major air command officials, namely, those in education services offices and the command librarians, became the monitoring agents

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<sup>11</sup> Colonel Barton, loc cit

for the correspondence and reports associated with this study. As an officially approved Air Force study, the survey warranted the use of all necessary official communications channels. The use of official stationery, Air Force printing plant facilities, postal service and telephone service was included in a general authorization granted by Colonel George V. Fagan, Director of the Air Force Academy Library.

The letter of September 22, 1967, identified for the major air command directors of education services specific limitations, such as the restriction in scope to those bases with college-level programs offered on the military reservations themselves and the exclusion of junior college programs. A suspense date, or due date, of November 6, 1967, was assigned. This would allow three weeks, or fifteen workdays, in each direction as correspondence was sent through the official channels of the two or more headquarters from the major air command level to the base level and returned through the same channels to the Air Force Academy. Each letter contained a listing of the bases within the particular major air command that were to be included in the study. With each letter was a supply of questionnaire sheets to be completed by the base education services officers of the Air Force installations named in the letter. The questionnaire form, a copy of which is included in Appendix E, was to be completed for each course taught by a civilian college or university in classes held on the base during off-duty hours. Information to be entered included the name of the college or

university, the title of the course and its identification by number and academic department, the academic level of the course and the number of students enrolled. Two other items of information were also requested (1) required and recommended readings assigned by the instructor of each course and (2) library services responsibility. Instructions were given to place the work text in parentheses after a required reading item which was actually the textbook prescribed for the course, to distinguish such a book from those which would be expected to be available in the library. With regard to library services responsibility, the person completing the questionnaire was asked to specify what responsibilities, if any, had been assumed by the college or university offering the course, for supplying library services, resources or financial aid to the base library. The purpose of this phase of the study was to collect the information that would provide material for the questionnaire which subsequently would be forwarded to the base librarians of the Air Force installations included in the survey.

Pilot study During October 1967, with the permission and assistance of Lucia Gordon, Command Librarian, Air Defense Command, and Edwin Peterson, Chief of the Education Division of that command, a pilot study of the procedures planned for use in the base library survey was completed at the Ent Air Force Base Library, Colorado Springs, Colorado. The base librarian, who completed all steps of the library questionnaire in less than three hours, made two suggestions for modifying it, both of which were

adopted. The first was that the instructions for checking book collections to ascertain the availability of listed items be amended to allow the substitution of equivalent editions issued by publishers other than the ones listed in the bibliographic entries. The second suggestion was that both the fiscal year 1967 and fiscal year 1968 budgets of base libraries be included as questionnaire items, to broaden the representation of base library financial resources. Advanced as a part of the latter suggestion was the proposal that both appropriated and nonappropriated funds be reported.<sup>12</sup> This part of the suggestion was also accepted.

Library questionnaire The questionnaire sheets completed by base education services officers were forwarded to the Air Force Academy by directors of education services of the major air commands and separate operating agencies. As these arrived, library questionnaires were prepared, based on the information that had been collected by the base education services officers. Books on required and recommended reading lists were checked as to author and title in order to ascertain whether the listed publications were actually in print. The 1966 and 1967 editions of Books in Print were used for this purpose.<sup>13</sup> Verification of author, title, edition and

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<sup>12</sup>Comments of Helen Taliafero, Librarian, Base Library, Ent Air Force Base, Colorado, on October 18, 1967.

<sup>13</sup>The complete citations for this and the other standard bibliographic reference tools mentioned in this part of the chapter are contained in the bibliography.

facts of publication, when these were not fully reflected in Books in Print, was achieved through a search of the United States Catalog, Cumulative Book Index, A Catalog of Books Represented by Library of Congress Printed Cards, Library of Congress Author Catalog or The National Union Catalog. From the information thus acquired, a bibliographic data bank was developed which served as a ready reference source of verified book title information. Books which were no longer in print were eliminated from consideration in the survey, since the average base librarian was assumed to have but limited access to the resources and markets of out-of-print book vendors.

The titles of periodicals on required or recommended reading lists were verified in Ulrich's International Periodicals Directory, the Union List of Serials or New Serial Titles. The basic reference for verifying the titles of newspapers was N W Ayer and Son's Directory. A data bank of verified titles of periodicals and newspapers also was established as a reference source.

The library questionnaire consisted of five pages of instructions and a minimum of twelve pages of attachments. A copy is included in Appendix E. Each questionnaire, after being assigned an identifying number, was forwarded through the office of the appropriate command librarian to the particular base librarian, who was instructed to follow twenty-three numbered steps in completing the form. Book list 1A, the first of the attachments, was a compilation of all the book titles on the required reading

lists for all courses taught on the particular base as part of the college-level, off-duty education program. The librarian was asked to indicate whether each of the book titles was available as part of the library collection. Similar instructions were applicable to book list 1B, a compilation of books on instructors' recommended reading lists.

Step 3 of the questionnaire pertained to subject category list 1A. The subject categories on this list were those which related to the five off-duty courses which had the highest enrollment at the base under study. Dewey Decimal classification subject categories encompassing the content of these courses, as well as all graduate courses taught at the particular base, were included in subject category list 1A. The appropriate Dewey Decimal ranges of numbers from the "second summary" were recorded on the lists.<sup>14</sup> A typical entry was "Technology Business and Related Enterprises, 650-659," representing business administration and management courses.<sup>15</sup> The instructions directed the use of an ordinary ruler to measure the combined thickness of the shelflist cards for each range of numbers, listing additional fractions of one-fourth inch or more. In the event the librarian found the thickness of shelflist cards within a given subject category to be less than one inch, he was to count

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<sup>14</sup> Melvil Dewey, Dewey Decimal Classification and Relative Index, Vol. 1 (seventeenth edition, Lake Placid Club, New York: Forest Press, Incorporated, of Lake Placid Education Foundation, 1965), pp. 867-893.

<sup>15</sup> Ibid., p. 110.

the actual number of shelflist cards for that subject category and to enter this number in the appropriate block. Each shelflist card would represent one book title. The purpose of this measurement was to calculate the number of book titles within each subject category. The noted library planner and consultant Keyes D. Metcalf has suggested that an average of one hundred shelflist cards occupy an inch of filing space.<sup>16</sup> Hence for each inch of thickness of shelflist cards within a given range of Dewey Decimal numbers, one might reasonably assume that the library possessed one hundred book titles in the corresponding subject category. All libraries included in this survey used the Dewey Decimal system of classification.

Whereas Step 3 was designed to reveal the extent of the book collection within the subject categories representative of the principal course offerings of the base education program, Step 4 was calculated to provide an indication of how current the holdings in these subject areas were. Step 4 referred the librarian to subject category list 1B. This list contained the same subject categories and corresponding Dewey Decimal number ranges that were on subject category list 1A, but the procedure was modified. The instructions were to use the first inch of shelflist catalog cards within each range of Dewey Decimal numbers given, and to count and record the total number of titles with a copyright date

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<sup>16</sup>Keyes D. Metcalf, Planning Academic and Research Library Buildings (New York: McGraw-Hill Book Company, 1965), p. 396.



of 1962 or later, excluding the titles designated as juvenile literature. A 1962 or later copyright date would identify the book as being no more than five years old at the time of the survey. For the subject categories in which the library held less than one-inch thickness of shelflist cards, the librarian was to count the cards and to enter the total number of titles within the category and then the number of those titles having a copyright date of 1962 or later. For libraries with two or more inches of thickness of shelflist cards in a subject category, the total of the first-inch sample, multiplied by the number of inches of thickness of shelflist cards for the subject category, would be sufficient to indicate the currency of this segment of the book collection.

The next two steps related to periodicals and newspapers. List 1A was a compilation of the periodical and newspaper titles which had appeared on the required reading lists for college-level courses taught on the base. Newspaper and periodical list 1B was a compilation of the recommended reading lists, as distinguished from required reading lists. The librarian was asked to indicate whether the base library had a subscription to each item, or was otherwise obtaining current issues of it. Provided the item was in the library collection or on loan to the library, a further step was to be taken, namely, that of giving the earliest date of a substantially unbroken run of the item. This final step would reflect the availability of back issues that might be needed for research.

Step 7, which pertained to indexes and abstracts relating

to periodical literature, referred the librarian to index and abstract list 1A, which contained two basic indexes, Readers' Guide to Periodical Literature and Air University Library Index to Military Periodicals, and three supplementary indexes, Social Sciences and Humanities Index, Applied Science and Technology Index and PAIS (Public Affairs Information Service)

Social Sciences and Humanities Index was listed with the supplementary indexing sources because of the breadth of subject matter featured in the approximately 206 periodicals it encompassed.<sup>17</sup>

Among the subject fields covered are the following:

... anthropology, archaeology and classical studies, area studies, economics, folklore, geography, history, language and literature, philosophy, political science, religion and theology, sociology and theater<sup>18</sup>

PAIS, also broad in its coverage, is cited by White as

a selective but comprehensive subject index to current literature on economics, social conditions, politics, government, international relations and public administration<sup>19</sup>

In addition to its selective indexing of "more than 1000 periodicals published in English throughout the world,"<sup>20</sup> PAIS also offers a

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<sup>17</sup>"List of Periodicals Indexed," Social Sciences and Humanities Index, LVI (June, 1968), iii-vi

<sup>18</sup>Cataloging and Indexing Services (New York: H. W. Wilson Company, 1965), p. 22

<sup>19</sup>Carl M. White and Associates, Sources of Information in the Social Sciences: A Guide to the Literature (Totowa, New Jersey: Bedminster Press, 1964), p. 32.

<sup>20</sup>Constance M. Winchell, Guide to Reference Books (eighth edition, Chicago: American Library Association, 1967), p. 345

"selective list of the latest books, pamphlets, government publications" and reports issued by public and private organizations <sup>21</sup>

Applied Science and Technology Index, covering some 235 periodicals, was likewise regarded as fairly comprehensive within the range of its indexing. <sup>22</sup> Winchell characterizes it, in part, as follows:

a cumulative subject index to . . . American and English periodicals in the fields of aeronautics, automation, chemistry, construction, electricity and electrical communication, engineering, geology and metallurgy, industrial and mechanical arts, machinery, physics, transportation and related subjects <sup>23</sup>

The aforementioned indexes were deemed sufficiently extensive in scope to meet the requirements of most undergraduate study and research related to off-duty education programs. In addition, they were considered adequate for a substantial portion of the basic work associated with many graduate-level courses.

Step 8 referred to index and abstract list 1B. On it were enumerated the indexes and abstracts peculiar to specific graduate courses offered on the base. For example, Education Index and Psychological Abstracts were applicable to graduate courses in education. These specialized indexing and abstracting tools were

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<sup>21</sup>Public Affairs Information Service Bulletin, LIV (May 4, 1968), cover.

<sup>22</sup>"List of Periodicals Indexed," Applied Science and Technology Index, LVI (June, 1968), iii-vi.

<sup>23</sup>Winchell, op cit., p. 531.

chosen on the basis of evaluative comments contained in the reference guides of Winchell, Walford and White.<sup>24</sup> A compilation of these indexes and abstracts, identified with the graduate courses to which they are appropriate, is included in Appendix F.

In completing Steps 7 and 8, the librarian was instructed to indicate whether the base library had a subscription to each item, or was otherwise obtaining current issues of it. Provided the item was in the library collection or on loan to the library, a further step was to be taken, namely, that of giving the earliest date of a substantially unbroken run of the item. As in the case of the periodicals and newspapers, the availability of back issues would be an asset for research. The librarian was asked to enter the title of any index or abstract in his library collection which he considered to be an acceptable substitute for one of the indexes or abstracts named on index and abstract list 1B. In such an event, he was to indicate the particular subject field to which the specialized index or abstract of his library collection was applicable. In the event no graduate-level course was offered on the base as part of the off-duty education program, the phrase "Not applicable" was written across the blank form identified as index and abstract list 1B.

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<sup>24</sup>Winchell, op cit, pp 393 et passim, A. J. Walford (ed.), Guide to Reference Material (London: The Library Association, 1959), pp 65 et passim, Supplement (London: The Library Association, 1963), pp 35 et passim, Guide to Reference Material, Vol. 1: Science and Technology (second edition, London: The Library Association, 1966), pp 53, 72 et passim, White, op cit, pp 159, 300 et passim.

The next step referred to dictionary list 1A, which contained the names of two dictionaries, Webster's Third New International Dictionary and Random House Dictionary of English Usage, the basic list of unabridged dictionaries. It named, as a supplementary item, Webster's New International Dictionary (second edition). List 1A also indicated that any other unabridged dictionary with a copyright date later than 1950 would be acceptable as an alternate to the Webster's New International Dictionary, which has a copyright date of 1954.<sup>25</sup>

Step 10 pertained to dictionary list 1B, on which were enumerated dictionaries peculiar to specific graduate courses offered on the base. For example, Good's Dictionary of Education was applicable to graduate-level education courses.<sup>26</sup> As in the case of indexes and abstracts, provision was made for the librarian to record on List 1B the names of dictionaries that were part of the base library collection which were considered appropriate substitutes for the specified items. In the absence of any graduate-level course on the base, or if no specialized dictionary were applicable to any graduate course offered, the phrase "Not applicable" was written across the blank form identified as dictionary list 1B. The specialized dictionaries for this list were chosen on

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<sup>25</sup> Webster's New International Dictionary of the English Language (second edition, unabridged, Springfield, Massachusetts: G. and C. Merriam Company, 1954), ii.

<sup>26</sup> Carter V. Good, Dictionary of Education (New York: McGraw-Hill Book Company, 1959).

the basis of evaluative comments in the published reference guides of Winchell, Walford and White.<sup>27</sup> A compilation of these dictionaries identified with the graduate courses to which they are appropriate is included in Appendix F.

The next two steps pertained to encyclopedias. In Step 11 the librarian was referred to encyclopedia list 1A, on which appeared the following titles Encyclopaedia Britannica, Encyclopedia Americana and Collier's Encyclopedia. This list of general encyclopedias was selected on the basis of evaluations found in General Encyclopedias in Print and Subscriptions Books Bulletin Reviews 1962-1964.<sup>28</sup> The librarian was asked to indicate which of the three general encyclopedias the library collection contained and to state the copyright date of each set in the collection.

Step 12 referred to encyclopedia list 1B, on which were named the encyclopedias related to specific graduate courses offered on the base. The librarian was instructed to follow the procedure used for encyclopedia list 1A, the basic list. He was provided the opportunity to enter the title of any encyclopedia set in his library collection which he considered to be an acceptable substitute for one of the

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<sup>27</sup>Winchell, op. cit., pp. 349, 393 et passim. A. J. Walford (ed.), Guide to Reference Material (London: The Library Association, 1959), p. 228, Vol. I Science and Technology (second edition, London: The Library Association, 1966), pp. 55, 227, White, op. cit., pp. 165, 219-220 et passim.

<sup>28</sup>James P. Walsh (comp.), General Encyclopedias in Print: A Comparative Analysis (fifth edition, New York: R. R. Bowker Company, 1966), pp. 10-27; and Subscriptions Books Bulletin Reviews 1962-1964 (Chicago: American Library Association, 1964), pp. 21-26, 61-65.

specialized encyclopedias on list 1B. In such an event, he was to record the copyright date and the particular subject field to which the specialized encyclopedia of his library collection was applicable. In the absence of any graduate-level course on the base, or if no specialized encyclopedia were applicable to any graduate course offered, the phrase "Not applicable" was written across the blank form identified as encyclopedia list 1B. The evaluations made by Winchell and White provided the basis of the selections of specialized encyclopedias.<sup>29</sup> A compilation of these encyclopedias, identified with the graduate courses to which they are appropriate, is included in Appendix F.

The next section of the questionnaire, Steps 13 through 16, related to professional reference assistance. The librarian was instructed to state (1) the total number of hours during which the library was open to the public each week, (2) the total number of hours in which a professional librarian was present for reference assistance each week, (3) the number of days each week during which the library offered professional reference service at least three hours after the close of the official duty day, and (4) the number of professional librarians authorized for the library. As previously noted, Air Force Regulation 214-1 has a table of suggested guidelines for base librarian authorizations, to wit: one librarian "if the base library serves (including tenants, dependents and civilians)"

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<sup>29</sup> Winchell, op. cit., pp. 543, 547 et passim; White, op. cit., pp. 4, 345.

between 1,000 and 11,000 persons, and two librarians if it serves 11,001 or more.<sup>30</sup> This part of the directive, while generally followed, is actually a guideline, now more than four years old. The Support Manpower Requirements Branch, Air Force Office of Manpower and Organization, in April 1968 specified more stringent manning criteria in regard to librarians at Air Force base libraries. The following standard now applies: one librarian for a base population of 2,001 and over. Base libraries serving from 500 to 1,000 persons are authorized one library assistant but no librarian. Those with populations of 1,001 to 2,000 will be authorized no librarian but will be served by one library assistant and one administrative clerk. The maximum authorization for sub-professionals, in the case of a base library serving a population of 20,000 or more, is seven.<sup>31</sup> The impact of these different manning criteria, according to the Director of Air Force Library Service and the Command Librarian, Aerospace Defense Command, has not yet been felt at most base libraries, but as normal attrition of personnel occurs, the effect on off-duty education programs seems likely to

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<sup>30</sup> United States Department of the Air Force. Air Force Regulation 212-1, "Air Force Library Service," March 22, 1965, Table 4.

<sup>31</sup> Letter, Colonel William L. McDowell, Jr., Deputy Director Manpower and Organization (AFOMODS), Headquarters United States Air Force, to the major air commands and separate operating agencies, April 2, 1968, "Price-Out of USAF Personnel Services Criteria," and Attachment 1 thereto.



become severe unless the policy is changed.<sup>32</sup>

Steps 17 through 23 were categorized as supplementary data. In Step 17 the librarian was asked to indicate the number of feet of floor space in the reading area of the library, and in Step 18 he was asked to state the seating capacity. Step 19 required a check mark on the appropriate line, to indicate whether patrons had access to microtext materials in the library. In the event of an affirmative reply to Step 19, the librarian was to state whether the collection included microfilm reels, microfiche panels, a microfilm reader-printer or a microfiche reader-printer. In Step 21 the librarian was asked to record the library budget allocation for fiscal years 1967 and 1968, apportioned in each of three categories: (1) books, (2) periodicals and newspapers and (3) bindery. It was recognized that budget totals alone would not provide an accurate picture of how much was being spent by the library in support of college-level, off-duty education, inasmuch as the total mission of the base library, not merely the requirement for library service to persons enrolled in academic programs, was reflected in the figures given. These totals would, however, afford the basis for at least a general appraisal of the financial structure of the library operation. If, for example, the library pattern of expenditure showed that no funds were being used for bindery, it would not be unreasonable to conclude that provision was not being made for the preservation of back numbers of periodicals, a commonly recognized tool for research.

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<sup>32</sup>Statement by John L. Cock, August 21, 1968, telephoned interview; and Statement by Lucia Gordon, September 3, 1968, personal interview.

Because of the probability that libraries in nearby communities might well supplement the resources of the base library, Step 22 required the librarian to give the names and locations of other libraries within a radius of fifty miles of the base library, at which officers and airmen from the base had access to professional reference assistance, college-level resources and borrowing privileges at no cost to the individual.

The final step of the questionnaire was to estimate the number of man-hours spent in completing it. The average of the answers to this question it was thought, would provide a guideline for anyone contemplating the adoption of this procedure

Verification procedure. During the months of June and July 1968, visits were made to the libraries of the following Air Force installations in order to verify the accuracy of entries made on questionnaires by base librarians: Vandenberg Air Force Base, California, and Ellsworth Air Force Base, South Dakota (Strategic Air Command), Langley Air Force Base, Virginia, and Shaw Air Force Base, South Carolina (Tactical Air Command), Hill Air Force Base, Utah, and Robins Air Force Base, Georgia (Air Force Logistics Command); Andrews Air Force Base, Maryland (Headquarters Command); Lowry Air Force Base, Colorado (Air Training Command); Richards-Gebaur Air Force Base, Missouri (Aerospace Defense Command), and the Air University Library, Maxwell Air Force Base, Alabama (Air University). Factors influencing the selection of these base libraries were the following (1) the need to

include libraries of the majority of the participating major air commands and separate operating agencies, a goal attained through visits to the libraries of seven of the nine commands or separate operating agencies taking part in the study, (2) the objective of visiting at least ten percent of the seventy-one base libraries studied, a goal which was exceeded, since ten libraries, or approximately fourteen percent of those studied, were visited, (3) the goal of including a broad geographic representation in the visits, an objective likewise achieved, inasmuch as libraries of ten states were visited, of the total of thirty-eight states and the District of Columbia represented in the study, (4) the objective of including libraries supporting graduate programs as well as those which supported only undergraduate programs. Of the ten libraries visited, only four (Richards-Gebaur, Langley, Shaw and Lowry Air Force base libraries) supported undergraduate programs only

At each library visited, shelflist cards were checked for evidence of each item of book list 1A, the required reading list, and book list 1B, the recommended reading list, which had been reported as being in the collection. Kardex or other files were reviewed for evidence of each item of periodical and newspaper list 1A, the required list, and periodical and newspaper list 1B, the recommended reading list, which had been reported as being in the collection. A ruler was used to measure the thickness of shelflist cards reported on subject category list 1A, the Dewey Decimal ranges of numbers encompassing the curriculum-related subject classes. In those instances in which less than one inch of thickness of shelflist cards

had been reported for one or more subject categories, an actual count of the cards was made as part of the verification procedure. A similar count was made to verify the total number of shelflist cards, within prescribed samples, reflecting book titles with a copyright date of 1962 or later, recorded on subject category list 1B. Library holdings of indexes, abstracts, dictionaries and encyclopedias were checked either by shelflist or physical count. Evidence of budget allocations for fiscal years 1967 and 1968 was also examined.

Supplementary survey In order to provide officials of the colleges and universities involved in base education programs an opportunity to register their views concerning the quality of library support, single-page survey forms, accompanied by an explanatory letter, were sent to them in July 1968. The officials were asked to indicate, by drawing a circle around the appropriate one-word answer, whether (1) the instructors of the courses offered by their institution on the named Air Force installation were satisfied with the overall quality of the library support of the education program during the fall term of academic year 1967-1968, (2) the institution worked closely with the base librarian in establishing an interlibrary loan program to supplement the resources of the base library; (3) the comments of the students who used the base library in the fall term of academic year 1967-1968 as an adjunct of the academic program were indicative of overall satisfaction with library resources and professional reference assistance, and (4) the base library was

open a sufficient number of hours weekly during the fall term to satisfy the library reference needs of instructors and students. Eighty-nine of these survey forms were dispatched to the representatives of the civilian institutions concerned, the forms being routed through the base education services officers. Unlike the questionnaires sent to base librarians, who are Department of the Air Force Civil Service employees, and whose replies were monitored by command librarians to ensure prompt response, these supplementary survey forms were sent to employees of civilian institutions. The percentage of replies, consequently, was expected to be lower.

Evaluation formula. The evaluation formula used in the study reflected consideration of two objectives cited by Wilson and Tauber resources for instruction and research and a competent library staff.<sup>33</sup> The Special Libraries Association concern for the staff and collection was also recognized.<sup>34</sup> Of the facets of library organization and operation emphasized in the 1959 standards of the American Library Association, the library collection, the staff and quality of service were incorporated in the evaluation system employed in this

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<sup>33</sup>Louis R. Wilson and Maurice F. Tauber, The University Library: The Organization, Administration, and Functions of Academic Libraries (New York: Columbia University Press, 1956), pp. 19-21.

<sup>34</sup>Special Libraries Association, Professional Standards Committee, "Objectives and Standards for Special Libraries," Special Libraries, LV (December, 1964), 672-676.

study.<sup>35</sup> The collection was the most commonly emphasized point in the standards and guidelines issued by the regional accreditation associations, and next to the collection in importance was the library staff.<sup>36</sup> These were two of the points of emphasis suggested as "prime evidence" in the 1968 guide to library evaluation issued by the Association of College and Research libraries, which contained the following instructive comment:

In evaluating the collections, there must be discrimination among subject fields and some attention paid to needs of individual courses.

The full scope of course and research interests must be covered by good books, both as to chronological periods and degrees of subject specificity. . . .<sup>37</sup>

This recognition of the worth of a curriculum-oriented collection, which is also observed in the rating system of Clapp and Jordan, became a central consideration in the construction of the evaluation system used in this study.<sup>38</sup>

The rating system concerned seven elements of evaluation: (1) books, including those on required reading lists, those on recommended reading lists and those falling within curriculum-related

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<sup>35</sup> American Library Association, Association of College and Research Libraries, "Standards for College Libraries," College and Research Libraries, XX (July, 1959), 275-279.

<sup>36</sup> Supra, pp. 72-79.

<sup>37</sup> American Library Association, Association of College and Research Libraries, "Guide to Methods of Library Evaluation," College and Research Libraries News, XXIX (October, 1968), 294-295.

<sup>38</sup> Verner W. Clapp and Robert T. Jordan, "Quantitative Criteria for Adequacy of Academic Library Collections," College and Research Libraries, XXVI (September, 1965), 374.

subject categories; (2) periodicals and newspapers, including those on required reading lists and those on recommended reading lists, (3) indexes and abstracts pertaining to periodical literature, (4) dictionaries, (5) encyclopedias, (6) professional reference service and (7) supplementary data, including the availability of duplicate copies of books on required reading lists, back issues of periodicals, indexes, abstracts, microtext materials and other suitable libraries

Besides the five librarians who initially reviewed the dissertation proposal and made recommendations pertaining to various parts of it,<sup>39</sup> a committee of five more librarians, representing civilian academic libraries and Air Force base and special libraries, was chosen to make recommendations related to the scoring formula. The committee members were Paul N. Frame, Director of Porter Library, Temple Buell College, whose career had included more than twelve years of professional experience in developing college-level library collections, Lucia Gordon, Command Librarian, Aerospace Defense Command, who had served more than twenty-six years as a Department of the Air Force and Department of the Army librarian; August Hannibal III, Reference Librarian, United States Air Force Academy Library, a retired Air Force officer with knowledge of Air Force libraries, from the point of view of the patron of such libraries; Mary Marinan, Librarian, Armed Forces Air Intelligence Center Library, Lowry Air Force Base, whose twenty-five years of experience as a professional

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<sup>39</sup>Supra, pp 86-88.

librarian had included twelve years in Air Force major air command library staff positions and six years in an undergraduate academic library; and James E. Nichols, Assistant Professor, Graduate School of Librarianship, University of Denver, whose more than three years of experience as a faculty member at the School of Librarianship had been preceded by an extensive background in academic libraries.<sup>40</sup> These librarians were considered to have sufficiently extensive professional experience to act as a sounding board in the construction of the evaluation formula. The fact that three of the committee members were affiliated with Air Force Library Service and two were associated with civilian academic institutions afforded appropriate balance to the committee. Three phases of recommendation were accomplished by members of the committee, each member rendering an independent judgment on each of the phases.

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<sup>40</sup>Who's Who in Library Service: A Biographical Directory of Professional Librarians in the United States and Canada (Hamden, Connecticut: Shoe String Press, 1966), pp. 219, 507; Statement, Lucia Gordon, Command Librarian, Aerospace Defense Command, November 19, 1968, personal interview; Statement, Mary Marinar, Librarian, Armed Forces Air Intelligence Center Library, Lowry Air Force Base, Colorado, December 4, 1968, personal interview; "Professional Staff - USAF Academy Library" (unpublished multilithed summary of the education and experience of the members of the professional staff of the United States Air Force Academy Library, compiled by the Administration Section of the Academy Library), January 1968; and Statement, August Hannibal III, Reference Librarian, United States Air Force Academy Library, November 19, 1968, personal interview.



In Phase I, the committee members received the following background information and instructions:

In their capacity to support off-duty education programs offered on Air Force installations by civilian colleges and universities, seventy-one base libraries are to be evaluated in the seven elements listed below. Please indicate the percentage value (based on a total of 100%) that each of the seven elements should be accorded in the rating system. The order of listing of the seven elements has been determined by random selection. Consider the element as a whole in assigning a recommended percentage. Do not show a breakdown of percentages for the subsections within a single element.

<u>Element</u>	<u>Item (with major subsections indicated)</u>	<u>Recommended Percentage</u>
I	Indexes and abstracts in the library collection	_____
II	Dictionaries in the library collection	_____
III	Hours of professional reference service available each week	_____
IV	Encyclopedias in the library collection	_____
V	Books in the library collection	_____
	A. Books on instructors' required reading lists	
	B. Books on instructors' recommended reading lists	
	C. Total books in each major curriculum-related subject category	
	D. Current books in each major curriculum-related subject category	
VI	Periodicals and newspapers in the library collection	_____
	A. Periodicals and newspapers on instructors' required reading lists	

- B. Periodicals and newspapers  
on instructors' recommended  
reading lists

#### VII Supplementary data

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- A. Duplicate copies of more  
than 50% of the books on  
required reading lists
- B. Substantially unbroken run  
of at least 50% of the  
periodicals on required  
reading lists, covering the  
preceding 3-year period or  
more
- C. Substantially unbroken run  
of at least 50% of the  
periodicals on recommended  
reading lists, covering the  
preceding 3-year period or  
more
- D. Substantially unbroken run  
of Readers' Guide to  
Periodical Literature,  
covering the preceding  
3-year period or more
- E. Microtext materials available
- F. Other suitable libraries  
available

Each committee member acted without consultation with other members, since the composition of the committee was not initially made known to its members. Recommendations of the committee members established the framework of percentage values and other standards used in the evaluation system (cf. Table XV, Evaluation Formula for Base Libraries Supporting Undergraduate and Graduate Educational Programs, in Appendix D). Table XVI shows the recommended percentage values for the seven library

resource and service elements encompassed in the study, each committee member being identified merely by a number. Table XVI also portrays the mode of the committee recommendations for each of the seven elements as well as the percentage values adopted for use in the study. Four of the five committee members recommended a percentage value of ten for element I, indexes and abstracts, and this value was used in the study. Three committee members recommended a percentage value of five for element II, dictionaries, and this value was used in the study. Three recommended a percentage value of ten for element III, hours of professional reference service available each week. This percentage value was accepted for use in the study. In regard to element IV, encyclopedias, two committee members recommended a percentage value of three; one member, a percentage value of five; another member, a percentage value of ten, and one member, a percentage value of twenty. Although the mode was a percentage value of three, the range of recommended values for element IV made it advisable to proceed to the other three elements and to adopt the residual value obtained by subtracting the total of the percentage values used for elements I, II, III, V, VI and VII from one hundred percent. In this manner a percentage value of ten was assigned to element IV, encyclopedias. Based on the recommendations of three of the five committee members, a percentage value of thirty was assigned to element V, books. Three committee members recommended a percentage value of twenty for element VI, periodicals and newspapers,

TABLE XVI

RECOMMENDED PERCENTAGE VALUES FOR LIBRARY RESOURCE  
AND SERVICE ELEMENTS EVALUATED

Committee Member Number	Element <sup>a</sup>						
	I	II	III	IV	V	VI	VII
1 . . . . .	10	5	10	20	25	20	10
2 . . . . .	10	5	10	5	35	15	20
3 . . . . .	10	5	10	10	30	20	15
4 . . . . .	10	2	20	3	30	20	15
5 . . . . .	15	2	25	3	30	15	10
Mode of Committee Recommendations	10	5	10	3	30	20	15/10
Percentage Values Used	10	5	10	10	30	20	15

<sup>a</sup> Library resource and service elements were listed in the sequence of random selection. Element I = Indexes and abstracts, Element II = Dictionaries, Element III = Hours of professional reference service available each week, Element IV = Encyclopedias, Element V = Books, Element VI = Periodicals and newspapers, Element VII = Supplementary data.

and this recommendation was adopted. In regard to element VII, supplementary data, two committee members favored a percentage value of fifteen; two, a percentage value of ten; and one, a percentage value of twenty. Of the two modes, fifteen and ten, the former approximated the mean of the recommendations of the five committee members and was adopted.

Although the committee members were not familiar with the complete background of the study, their recommendations as to percentage values for the majority of the resource and service elements considered in the study of base libraries were generally consistent. The scoring formula used in the study was representative of the percentage values suggested by the committee. Of a total of 1,000 possible points, 300 points were allocated to the book collection, 200 to the periodical and newspaper collection, 200 to the periodical and newspaper collection, 100 to indexes and abstracts, 50 to dictionaries, 100 to encyclopedias, 100 to professional reference service and 150 to supplementary data (cf. Table XV, Appendix D).

In Phase II of the committee development of the scoring procedure, the committee members were asked to recommend the most appropriate distribution of 100 percentage points among the following subsections of Section I, the book collection:

<u>Subsection</u>	<u>Item</u>
I-A	Books on required reading lists of instructors
I-B	Books on recommended reading lists of instructors

- I-C Total book titles in each major curriculum-related subject category, that are in the library collection
- I-D Current book titles in each major curriculum-related subject category, that are in the library collection (the term current refers to books having a copyright date within the previous five years)

It was planned that the percentage values chosen for the four subsections, would, in turn, be converted to the point scale established for the evaluation formula. Table XVII depicts the recommendations of the committee in regard to percentage point apportionment for the four subsections of the book collection. A wide range of committee recommendations can be noted with respect to the emphasis to be accorded Subsection I-A, books on required reading lists. Committee members number 1 and number 5 both were representatives of college-level academic libraries, yet their suggested percentage point values, sixty-two and twenty-six, respectively, were at the extreme ends of the spectrum. The recommendations of the other members more closely approximated the mean of 43.6 percentage points. In Subsection I-B, books on recommended reading lists of instructors, three of the committee members recommended the allocation of twenty-five percentage points. Although the mean of the five recommendations was 20.6, the percentage adopted for use in the evaluation formula, with respect to Subsection I-B, was 25 percent, because this represented the opinion of three of five committee members. Subsection I-B was the only one of the four subsections in which such consistency of

recommendations was observed.

In Subsection I-C, total book titles in each major curriculum-related subject category, the range was from seven to fifty-one percentage points. Implicit in the point spread within this subsection is the understanding that professional opinion is subject to wide variation and is evidently imprecise in the determination of percentage distribution among factors involving subjective assessment. The mean of 20.2 percent approximated the 20 percent adopted for use in the evaluation formula.

The mean of the committee recommendations for Subsection I-D, current book titles in each major curriculum-related subject category, was 15.6 percent of the total. Fifteen percent was considered appropriate for use in the evaluation formula, cognizance being given to the fact that three of the committee recommendations had been lower than the mean.

On the basis of percentages represented in Table XVII, the scoring formula used in the study reflected the following apportionment of the 300 points allocated to the book collection.

<u>Subsection</u>	<u>Item</u>	<u>Points</u>
I-A	Books on required reading lists of instructors	120
I-B	Books on recommended reading lists of instructors	75
I-C	Total book titles in each major curriculum-related subject category	60
I-D	Current book titles in each major curriculum-related subject category	45

TABLE XVII  
RECOMMENDED PERCENTAGE POINT APPORTIONMENT FOR  
BOOK COLLECTION SUBSECTIONS

Committee Member Number	Subsection <sup>a</sup>				Total
	I-A	I-B	I-C	I-D	
1 . . . . .	62	17	10	11	100
2 . . . . .	49	25	7	19	100
3 . . . . .	44	25	20	11	100
4 . . . . .	37	25	13	25	100
5 . . . . .	26	11	51	12	100
Percentage Value Represented by Mean of Committee Recommendations	43.6	20.6	20.2	15.6	100
Percentage Apportionment Adopted for Use	40	25	20	15	100

<sup>a</sup> Legend I-A = Books on required reading lists of instructors; I-B = Books on recommended reading lists of instructors; I-C = Total book titles in each major curriculum-related subject category; I-D = Current book titles in each major curriculum-related subject category



Phase II of the committee formulation of the scoring system involved four other parts. Instructions for completing the second of these parts were as follows:

In Subsection I-A of Element #1 (books on required reading lists of instructors), points are to be awarded on the basis of percentage of books in the library collection, including those on loan to the library. The higher the percentage, the greater will be the number of points awarded. You are asked to indicate at which of the following percentage ranges you would award half the maximum possible points for this subsection, and to indicate at which range you would award no points at all. Circle the letter designation, in each of the two columns of letters, which corresponds to the most appropriate percentage range.

<u>Recommended Percentage</u> <u>Range for Awarding</u> <u>Half the Total Points</u> <u>Possible in the</u> <u>Subsection</u>	<u>Percentage in</u> <u>the Collection</u>	<u>Recommended</u> <u>Percentage</u> <u>Range for</u> <u>Awarding</u> <u>No Points</u>
a . . . . .	90-100 . . . . .	a
b . . . . .	80-89 . . . . .	b
c . . . . .	70-79 . . . . .	c
d . . . . .	60-69 . . . . .	d
e . . . . .	50-59 . . . . .	e
f . . . . .	40-49 . . . . .	f
g . . . . .	30-39 . . . . .	g
h . . . . .	20-29 . . . . .	h
i . . . . .	10-19 . . . . .	i
j . . . . .	0-9 . . . . .	j

Table XVIII shows the recommended percentage ranges for awarding half the total points possible in Subsection I-A, books on required reading lists of instructors, and the recommended percentage ranges for awarding no points at all within this subsection. The mean of the recommended percentage ranges was 56-65. This mean approximated the decile percentage range used in the study, namely, 50-59 percent. The latter range constituted the percentage of instructors' required reading lists of book titles which a base

library had to have in its collection in order to be given sixty of the one hundred twenty possible points allotted to Subsection I-A. Since a library having 90 to 100 percent of such book titles would receive one hundred twenty points, and a library having in its collection 50 to 59 percent would be awarded sixty points, it followed that the point awards for intermediate deciles would be proportional in scale. Point awards (cf. Table XV, Appendix D) were established as follows for the upper part of the scale:

<u>Percentage of Required Reading List Books in the Collection</u>	<u>Points</u>
90-100 . . . . .	120
80-89 . . . . .	105
70-79 . . . . .	90
60-69 . . . . .	75
50-59 . . . . .	60

For the lower part of the scale, the mean of committee recommendations was 16-25 percent. Because the library with no book titles would be awarded no points, the essential concern was to establish the upper limit in percentage range for the award of no points. The range adopted, which was representative of the majority of the percentage ranges recommended by committee members, was 0-19 percent. This allowed for approximate linearity in the point scale, since no points were allowed for the 0 to 19 percentage range, as shown below:

<u>Percentage of Required Reading List Books in the Collection</u>	<u>Points</u>
40-49 . . . . .	45
30-39 . . . . .	30
20-29 . . . . .	15
0-19 . . . . .	0

TABLE XVIII  
PERCENTAGE RANGES RECOMMENDED FOR POINT AWARDS  
IN SUBSECTION I-A<sup>a</sup>

Committee Member Number	Recommended Percentage Range for Awarding Half the Total Points Possible in the Subsection	Recommended Percentage Range for Awarding No Points
1 . . . . .	80-89	20-29
2 . . . . .	50-59	0-9
3 . . . . .	60-69	20-29
4 . . . . .	60-69	40-49
5 . . . . .	30-39	0-9
Mean of Committee Recommendations	56-65	16-25
Percentage Range Used	50-59	0-19

<sup>a</sup>Subsection I-A = Books on required reading lists of instructors

In the next part of Phase II of the committee development of the scoring formula, the instructions were as follows:

In Subsection I-B of Element #1 (books on recommended reading lists of instructors), points are to be awarded on the basis of percentage of books in the library collection, including those on loan to the library. The higher the percentage, the greater will be the number of points awarded. You are asked to indicate at which of the following percentage ranges you would award three-fifths of the maximum possible points for this subsection, and to indicate at which range you would award no points at all. Circle the letter designation, in each of the two columns of letters, which corresponds to the most appropriate percentage range.

<u>Recommended Percentage</u> <u>Range for Awarding</u> <u>Three-fifths of the</u> <u>Total Points Possible</u> <u>in the Subsection</u>	<u>Percentage in</u> <u>the Collection</u>	<u>Recommended</u> <u>Percentage</u> <u>Range for</u> <u>Awarding</u> <u>No Points</u>
a . . . . .	90-100 . . . . .	a
b . . . . .	80-89 . . . . .	b
c . . . . .	70-79 . . . . .	c
d . . . . .	60-69 . . . . .	d
e . . . . .	50-59 . . . . .	e
f . . . . .	40-49 . . . . .	f
g . . . . .	30-39 . . . . .	g
h . . . . .	20-29 . . . . .	h
i . . . . .	10-19 . . . . .	i
j . . . . .	0-9 . . . . .	j

The basis of using three-fifths as the focal point of committee attention in Subsection I-B, rather than one-half, which had been the focal point in Subsection I-A, was to provide for a scale of points which at each level would encompass a broader percentage range than had been the case with Subsection I-A. Recommended readings were recognized as being commonly of less significance than required readings.

Table XIX shows the recommended percentage ranges for awarding three-fifths of the total points possible in Subsection I-B,

books on recommended reading lists of instructors, and the recommended percentage ranges for awarding no points at all within this subsection. Recommendations varied widely as to the appropriate percentage range of book titles from instructors' recommended reading lists which a library should hold in its collection in order to be awarded three-fifths of the points allotted to this portion of the evaluation. With three suggestions of upper ranges and two of considerably lower ranges, the mean, 46-55 percent, was used as a guide in establishing 40-59 percent as the appropriate decile range for the award of forty-five of the seventy-five points allotted to this subsection. Seventy-five points would be awarded to the library which held in its collection 80 to 100 percent of the book titles on the recommended reading lists of instructors. At the lower part of the scale, three of the five members of the committee recommended 0 to 9 percent as the range for the award of no points, and this majority recommendation was adopted. Proportional point values were then established for intermediate percentage ranges as follows:

<u>Percentage of Recommended Reading List Books in the Collection</u>	<u>Points</u>
80-100 . . . . .	75
60-79 . . . . .	60
40-59 . . . . .	45
20-39 . . . . .	30
10-19 . . . . .	15
0-9 . . . . .	0

Instructions for the next part of Phase II of the committee development of the scoring formula were as follows

TABLE XIX  
PERCENTAGE RANGES RECOMMENDED FOR POINT AWARDS  
IN SUBSECTION 1-B<sup>a</sup>

Committee Member Number	Recommended Percentage Range for Awarding Three-fifths of the Total Points Possible in the Subsection	Recommended Percentage Range for Awarding No Points
1 . . . . .	60-69	0-9
2 . . . . .	30-39	0-9
3 . . . . .	60-69	20-29
4 . . . . .	70-79	40-49
5 . . . . .	10-19	0-9
Mean of Committee Recommendations	46-55	12-21
Percentage Range Used	40-59	0-9

<sup>a</sup>Subsection 1-B = Books on recommended reading lists of instructors.

In Subsection I-C of Element #1 (total book titles in each major curriculum-related subject category), a recommendation is needed as to the minimum number of book titles a base library should have in each of the major curriculum-related subject categories. Major curriculum-related subject categories are those encompassing one or more courses which, taken as a group, reflect highest enrollment. Usually, five subject categories were identified at each Air Force base; however, in those instances in which graduate-level courses were included in the curricular offering, subject categories representative of all such courses were listed on the questionnaire sent to the base library. You are asked to recommend the minimum number of book titles a base library should have in each major curriculum-related subject category representative of undergraduate study, and the minimum number of book titles a base library should have in each curriculum-related subject category representative of graduate study.

Table XX shows the recommended minimum numbers of book titles per major curriculum-related subject category. Committee member number 1, whose recommendation of 3,000 book titles per major curriculum-related subject category at the undergraduate level and 5,000 at the graduate level far exceeded the recommendations of all other committee members combined, probably reflected his experience in an academic library. Even among the relatively conservative recommendations of the other members, there was a range of 260 book titles between extremes at the undergraduate level, as well as a range of 425 book titles between the outer limits at the graduate level. The subjective aspect of this search for a suitable standard is patently clear. The decision as to the appropriate standard to use in the study was to adopt the approximate mean of the four lowest recommendations and to eliminate from consideration the extremely high recommendation of committee member number 1. Thus, 150

TABLE XX

MINIMUM NUMBERS OF BOOK TITLES RECOMMENDED IN SUBSECTION I-C<sup>a</sup>

Committee Member Number	Recommended Minimum Number of Book Titles per Major Curriculum-Related Subject Category	
	Undergraduate Level	Graduate Level
1 . . . . .	3,000	5,000
2 . . . . .	40	65
3 . . . . .	90	175
4 . . . . .	300	450
5 . . . . .	100	25
Mean of Committee Recommendations	706	1,153
Mean of Recommendations of Committee Members 2, 3, 4 and 5	132	179
Minimum Number Established as Standard	150	180

<sup>a</sup>Subsection I-C = Total book titles in each major curriculum-related subject category



book titles for each major undergraduate subject category and 180 book titles for each graduate subject category became the standards in the evaluation formula.

As reflected in Table XV, Appendix D, a base library supporting undergraduate courses would be awarded points as follows, based on its number of book titles in each major curriculum-related subject category:

<u>Minimum Book Titles</u>	<u>Points</u>
150 or more . . . . .	60
125-149 . . . . .	50
100-124 . . . . .	40
75-99 . . . . .	30
50-74 . . . . .	20
25-49 . . . . .	10
0-24 . . . . .	0

The principle employed in Subsection I-A of allocating half the total possible points at the level corresponding to half the maximum number of items or half the percentage range attainable was used in this instance as well. Thirty points, or half the total points available for Subsection I-C, would be awarded to a library with 75 book titles, or half the 150 established as the minimum standard for each major curriculum-related subject category. Similarly, a base library supporting graduate courses would be awarded points according to the following scale:

<u>Minimum Book Titles</u>	<u>Points</u>
180 or more . . . . .	60
150-179 . . . . .	50
120-149 . . . . .	40
90-119 . . . . .	30
60-89 . . . . .	20
30-59 . . . . .	10
0-29 . . . . .	0

The final part of Phase II of the committee review contained the following instructions:

In Subsection I-D of Element #1 (current book titles in each major curriculum-related subject category), a recommendation is needed as to the minimum number of current book titles--those with a copyright date within the past five years--a base library should have in each of the major curriculum-related subject categories. You are asked to recommend the minimum number of current book titles a base library should have in each major curriculum-related subject category representative of undergraduate study, and the minimum number of current book titles a base library should have in each curriculum-related subject category representative of graduate study.

Table XXI lists the recommended minimum numbers of current book titles per major curriculum-related subject category. Committee member number 1, whose recommendation of 1,000 current book titles per major curriculum-related subject category at the undergraduate level and 2,000 at the graduate level far exceeded the combined recommendations of the other committee members, again seemed to reflect his background in academic library collections. The mean of the other four recommendations, at the undergraduate level, was 85; at the graduate level, 120. The standard adopted was 100 current book titles for each major curriculum-related subject category at the undergraduate level and 120 for each graduate-level, curriculum-related subject category.

As shown in Table XV, Appendix D, a base library supporting undergraduate courses would be awarded points on the following scale, based on the number of current book titles in each major curriculum-related subject category:

TABLE XXI  
MINIMUM NUMBERS OF CURRENT BOOK TITLES RECOMMENDED  
IN SUBSECTION I-D<sup>a</sup>

Committee Member Number	Recommended Minimum Number of Current Book Titles per Major Curriculum- Related Subject Category	
	Undergraduate Level	Graduate Level
1 . . . . .	1,000	2,000
2 . . . . .	20	35
3 . . . . .	10	25
4 . . . . .	275	400
5 . . . . .	35	20
Mean of Committee Recommendations	268	496
Mean of Recommendations of Committee Members 2, 3, 4 and 5	85	120
Minimum Number Established as Standard	100	120

<sup>a</sup>Subsection I-D = Current book titles in each major curriculum-related subject category.

<u>Minimum Book Titles</u>	<u>Points</u>
100 or more . . . . .	45
90-99 . . . . .	40
80-89 . . . . .	35
70-79 . . . . .	30
60-69 . . . . .	25
50-59 . . . . .	20
40-49 . . . . .	15
30-39 . . . . .	10
20-29 . . . . .	5
0-19 . . . . .	0

In this linear scale of points, approximately one-half the possible points were allocated at the level corresponding to half the maximum number of items, the principle adopted in Subsection I-A, books on required reading lists, and in Subsection I-C, total book titles in each major curriculum-related subject category. This concept was observed also in regard to base libraries supporting graduate programs. As specified in Table XV, Appendix D, a base library supporting graduate courses would receive points on the following scale, based on the number of current book titles in each major curriculum-related subject category.

<u>Minimum Book Titles</u>	<u>Points</u>
120 or more . . . . .	45
108-119 . . . . .	40
96-107 . . . . .	35
84-95 . . . . .	30
72-83 . . . . .	25
60-71 . . . . .	20
48-59 . . . . .	15
36-47 . . . . .	10
24-35 . . . . .	5
0-23 . . . . .	0

Because the evaluation formula was constructed in a manner designed to place thirty percent of the total point weight on the book

collection, provision was made for this to be accomplished even when instructors reported no required or recommended reading lists of book titles. As shown in Table XV, Appendix D, if Subsection I-A is not applicable, the point scores awarded in Subsections I-B, I-C and I-D are to be multiplied by 1.66; if Subsection I-B is not applicable, the point scores awarded in Subsections I-A, I-C and I-D are to be multiplied by 1.33; and if Subsections I-A and I-B are not applicable, the point scores of Subsections I-C and I-D are to be multiplied by 2.86.

Although the committee assistance in developing the scoring formula encompassed the seven library resource and service elements evaluated, insofar as recommending percentage weights was concerned its detailed study was limited to the book collection. The procedure used in establishing a point scale for Subsection I-A, books on instructors' required reading lists; Subsection I-B, books on instructors' recommended reading lists, Subsection I-C, total book titles in each major curriculum-reading subject category; and Subsection I-D, current book titles in each major curriculum-related subject category, served as the basis of the point system for the remaining portions of the evaluation formula.

The evaluation of element II, periodicals and newspapers, followed the pattern established for element I, books. Twenty percent of the evaluation formula, or two hundred points, applied to element II. One hundred twenty-five points, or approximately sixty percent of the possible points of the section, were assigned

to periodicals and newspapers on required reading lists of instructors, and seventy-five points, or approximately forty percent of the possible points of the section, were assigned to periodicals and newspapers on recommended reading lists. As shown in Table XV, Appendix D, the following point scale was used, based on percentage of required reading list titles in the collection:

<u>Percentage of Required Reading List Periodicals and Newspapers in the Collection</u>	<u>Points</u>
90-100 . . . . .	125
80-89 . . . . .	110
70-79 . . . . .	95
60-69 . . . . .	80
50-59 . . . . .	65
40-49 . . . . .	50
30-39 . . . . .	35
20-29 . . . . .	20
0-19 . . . . .	0

The following scale was applicable in regard to recommended reading lists of periodicals and newspapers:

<u>Percentage of Recommended Reading List Periodicals and Newspapers in the Collection</u>	<u>Points</u>
80-100 . . . . .	75
60-79 . . . . .	60
40-59 . . . . .	45
20-39 . . . . .	30
10-19 . . . . .	15
0-9 . . . . .	0

If Subsection II-A, periodicals and newspapers on required reading lists, did not apply, the point score awarded in Subsection II-B, periodicals and newspapers on recommended reading lists, would be multiplied by 2.66. If Subsection II-B did not apply, the point score

awarded in Subsection II-A would be multiplied by 1.6. These adjustments were designed to provide for twenty percent of the total point weight of the evaluation formula to be allotted to periodicals and newspapers. In those instances in which neither Subsection II-A nor Subsection II-B applied, the maximum possible point score for the evaluation formula was reduced by two hundred points.

Based on the committee recommendation to assign ten percent of the formula weight to indexes and abstracts, a scale of one hundred points was established which encompassed two basic indexes, three supplementary indexes and the specialized indexes and abstracts related to specific graduate courses. A compilation of the specialized indexes and abstracts, identified with the graduate courses to which they are appropriate, is included in Appendix F. In regard to the basic indexes, the library which had in its collection Readers' Guide to Periodical Literature (unabridged) and Air University Library Index to Military Periodicals received forty points. If it held only the former of these, it was awarded thirty points, if it had only the latter, it was given ten points. With respect to supplementary indexes, ten points were awarded if the library collection included all of the following, the first and second of the following, or the second and third of the following: Social Sciences and Humanities Index, Applied Science and Technology Index and PAIS (Public Affairs Information Service). Because of some duplication in periodical titles indexed by Social Sciences and Humanities Index and PAIS, allowance of the full credit of ten points

was made for the combination of either of them with Applied Science and Technology Index. Five points were awarded if the library collection included only one of the three supplementary indexes named

As indicated in Table XV, Appendix D, the following scale of points was used for the specialized indexes and abstracts relating to graduate courses.

<u>Percentage of Specialized Indexes and Abstracts in the Collection</u>	<u>Points</u>
90-100 . . . . .	50
80-89 . . . . .	45
70-79 . . . . .	40
60-69 . . . . .	35
50-59 . . . . .	30
40-49 . . . . .	25
30-39 . . . . .	20
20-29 . . . . .	15
10-19 . . . . .	10
1-9 . . . . .	5

To ensure that Section III, indexes and abstracts, received one hundred points, or ten percent of the weight of the evaluation formula, provision was made to adjust the scoring in instances in which the library supported no graduate program, or in which specialized indexes or abstracts were not applicable to the particular graduate courses offered. In the event Subsection III-C, specialized indexes and abstracts, did not apply, the point score awarded in Subsection III-A, basic indexes, and that awarded in Subsection III-B, supplementary indexes, were doubled.

The weight value for dictionaries was five percent of the total, or fifty points. The procedural pattern was similar to that used for indexes and abstracts. A scale of fifty points was



established which applied to two current unabridged dictionaries, two supplementary unabridged dictionaries and the specialized dictionaries related to specific graduate courses. A compilation of these specialized dictionaries, identified with the graduate courses to which they apply, is included in Appendix F. The library which had in its collection either of the following unabridged dictionaries received twenty points: Webster's Third New International Dictionary or Random House Dictionary of English Usage. In regard to supplementary unabridged dictionaries, a library received ten points if its collection included Webster's New International Dictionary (second edition) or any other unabridged dictionary with a copyright date later than 1950.

The following scale of points was used for the specialized dictionaries related to graduate courses:

<u>Percentage of Specialized Dictionaries in the Collection</u>	<u>Points</u>
90-100	20
80-89	18
70-79	16
60-69	14
50-59	12
40-49	10
30-39	8
20-29	6
10-19	4
1-9	2

To ensure that Section IV, dictionaries, received fifty points, or five percent of the maximum possible points of the evaluation formula, provision was made to adjust the scoring in instances in which the library supported no graduate program, or in which

specialized dictionaries were not applicable to the particular graduate courses offered. In the event Subsection IV-C, specialized dictionaries, did not apply, the point scores awarded in Subsection IV-A, current unabridged dictionaries, and in Subsection IV-B, supplementary unabridged dictionaries, were doubled.

Encyclopedias were assigned a weight value of ten percent, or one hundred of the total points. The point distribution was divided between two subsections. In Subsection V-A, general encyclopedias, fifty points were awarded if the library collection included a 1962 or later edition of at least one of the following: Encyclopaedia Britannica, Encyclopedia Americana or Collier's Encyclopedia. In Subsection V-B, specialized encyclopedias pertaining to graduate courses, the following scale of points was used

<u>Percentage of Specialized Encyclopedias in the Collection</u>	<u>Points</u>
90-100	50
80-89	45
70-79	40
60-69	35
50-59	30
40-49	25
30-39	20
20-29	15
10-19	10
1-9	5

As in the case of indexes and abstracts, and likewise in the case of dictionaries, provision was made to ensure that Section V received its allotted point weight in the formula. Provision was made to adjust the scoring in instances in which the library supported no

graduate program, or in which specialized encyclopedias were not applicable to the particular courses offered. In the event of the inapplicability of Subsection V-B, the score awarded in Subsection V-A was doubled

The committee recommendation having been made to allocate ten percent of the evaluation formula weight to Section VI, hours of professional reference service available each week (cf Table XVI, page 115), the following scale of points was established.

<u>Hours of Professional Reference Service Available Each Week</u>	<u>Points</u>
40 or more, including at least 12 after normal duty hours	100
40 or more, including at least 9 after normal duty hours	90
40 or more, including at least 6 after normal duty hours	80
40 or more, including at least 3 after normal duty hours	70
40 or more, not including time after normal duty hours	60
20 or more, but less than 40	50
Less than 20	0

As will be noted in greater detail in Chapter V, the majority of Air Force base libraries had but one professional librarian authorized, and he was required by Air Force directive to conform to a forty-hour work week <sup>41</sup>

One hundred fifty points, representing fifteen percent of the evaluation formula, were assigned to supplementary data, Section VII

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<sup>41</sup>United States Department of the Air Force, Air Force Regulation 40-523, "Hours of Work and Pay," October 31, 1968, paragraphs 1 and 2

Ten points were awarded if the library had duplicate copies of more than fifty percent of the books on instructors' required reading lists. Ten points were given to a library having a substantially unbroken set of at least fifty percent of the periodicals on required reading lists, covering the preceding three-year period or more, and five points were awarded if a library had a substantially unbroken run of at least fifty percent of the periodicals on recommended reading lists, covering the preceding three-year period or more. Ten points were awarded if the library collection contained a substantially unbroken run of Readers' Guide to Periodical Literature, covering the preceding three-year period or more. Ten points were given if the collection included a substantially unbroken set of at least fifty percent of the specialized indexes and abstracts relating to graduate courses offered on the base, covering the preceding three-year period or more. A library having microtext materials available was also awarded ten points. In regard to the availability of other suitable libraries, sixty points were given if the officers and airmen enrolled in off-duty courses had access, without charge, to the library of the institution sponsoring the courses, forty points were given if they had such access to the library of another college or university when the library of the sponsoring institution was not readily available, twenty points were awarded in the event a public library was the only other available library.

To maintain in Section VII the established fifteen percent of the total point score for the evaluation formula, appropriate scoring

adjustments were made. If the library questionnaire contained no required reading list of books, Subsection VII-a, pertaining to duplicate copies of such books, did not apply. Ten points were then added to Subsection VII-g, availability of other suitable libraries. If the questionnaire contained no required reading list of periodicals, Subsection VII-b, pertaining to an unbroken run of back issues of such periodicals, would not be applicable. The ten points from that subsection would thereupon be added to Subsection VII-g, availability of other suitable libraries. Similarly, if Subsection VIII-c, pertaining to back issues of periodicals on recommended reading lists, proved to be inapplicable, five points were to be added to Subsection VII-g. If the questionnaire contained no list of specialized indexes and abstracts relating to graduate courses, Subsection VII-e would not be applicable, and the ten points from this subsection would then be added to Subsection VII-g (cf. Table XV, Appendix D).

The committee members who helped formulate the point scoring procedure had a significant impact on the establishment of appropriate percentage levels for the scale of adjectival ratings to be assigned to base libraries studied. In Phase III the committee members were asked to recommend appropriate percentage ranges to encompass each of the five adjectival ratings adopted for use. In addition, they were asked to recommend an adjectival rating for each of seven questionnaires which were being rated as part of the study, and which represented approximately ten percent of the base libraries studied. Committee members were sent unmarked

photographic copies of the completed questionnaires, identified only by questionnaire number. Selection of questionnaires for committee evaluation was made with the objective of providing the committee members a suitable range of quality. Two of the questionnaires, numbers 29 and 59, represented libraries supporting graduate as well as undergraduate programs, the other questionnaires represented libraries which supported only undergraduate programs. The instructions to the committee members, in regard to percentage ranges for adjectival ratings, were the following:

The five adjectival ratings used are those listed below indicate the percentage range appropriate for each

<u>Adjectival Rating</u>	<u>Recommended Percentage Range</u>
Excellent . . . .	From _____% through _____%
Very Good . . . .	From _____% through _____%
Good . . . . .	From _____% through _____%
Satisfactory . . . .	From _____% through _____%
Unsatisfactory . . . .	From _____% through _____%

In the consideration of an appropriate percentage range for the adjectival rating of excellent, the recommendations of all but one committee member corresponded closely to the percentage range used in the evaluation formula, which was ninety to one hundred percent. Committee member number 1 recommended a range of ninety-one to one hundred percent, member number 2 recommended ninety-three to one hundred percent, member number 3 recommended ninety-one to one hundred percent, member number 4 recommended eighty-five to one hundred, and member number 5, ninety to one hundred. The mean of the committee recommendations was ninety to one hundred percent, which was adopted as the standard

for the rating of excellent.

The committee recommendations in regard to the adjectival rating of very good were, with one exception, generally consistent with the percentage range used in the evaluation formula, which was eighty through eighty-nine. Committee member number 1 suggested a percentage range of eighty through eighty-nine; committee member number 2 recommended a range of eighty-one through ninety-two; member number 3 recommended eighty-one through ninety; member number 4, whose proposed percentage range was, at the upper level, five points lower than that used in the evaluation formula, suggested a range of seventy-nine through eighty-four; member number 5 recommended a percentage range of eighty-three through eighty-nine. The mean of the committee recommendations was a percentage range of 80.8 through 88.8, which, at each limit of the scale, was within two tenths of a point of the percentage range adopted.

In their recommendations of percentage ranges for the adjectival rating of good, committee member number 1 recommended seventy through seventy-nine percent; member number 2 proposed sixty-five through eighty percent; member number 3 suggested sixty-six through eighty percent; member number 4 recommended sixty-nine through seventy-eight percent; member number 5, seventy-five through eighty-two. The mean of the committee recommendations, 69 through 79.8, was, at each limit of the scale, within one point of the percentage range adopted, namely, 70 through 79.

The next adjectival rating considered was that of

satisfactory. Although at the upper limit of the percentage range there is approximate correspondence between the recommendations of the committee and the standard used in the formula, at the lower end of the percentage range considerable difference can be observed between one recommendation and another and between the mean of the recommendations and the standard used in the formula. Committee member number 1 recommended a range of fifty-five through sixty-nine percent; committee member number 2 suggested a range of forty-six through sixty-four; member number 3 recommended twenty-six through sixty-five; member number 4 recommended sixty through sixty-eight; number 5 recommended seventy through seventy-four. The mean of the committee recommendations was 51.4 through 68.

With regard to the adjectival rating of unsatisfactory, recommendations were likewise inconsistent. There was a disparity between the mean of the recommendations and the percentage range used in the scoring formula, as well as marked difference in the recommendations of the five committee members. For this adjectival rating, committee member number 1 recommended a range of zero through fifty-four percent; member number 2 suggested a range of zero through forty-five percent; number 3 recommended zero through twenty-five percent; number 4, zero through fifty-nine; and number 5, zero through sixty-nine. The mean of the committee recommendations was 0 through 50.4.

In the absence of a clearly consistent pattern of committee opinion as to the appropriate percentage ranges for the adjectival



ratings of satisfactory and unsatisfactory, it was decided to continue the pattern of decile percentage ranges already established in the case of the adjectival ratings of excellent, very good and good. Accordingly, the decile range falling sequentially below that used for the rating of good was adopted for the rating of satisfactory. The percentage range used in the evaluation formula for satisfactory, therefore, was 60 through 69. It followed, then, that 0 through 59 would become the percentage range encompassing the adjectival rating unsatisfactory.

At the time the committee members were asked, as part of Phase III of their participation in the development of the evaluation procedure, to designate adjectival ratings for seven base library questionnaires, they were not familiar with the point system adopted for each of the seven resource and service elements. They did not have access to the evaluation formula represented in Table XV, Appendix D, to which they had contributed individually. Each adjectival rating to be assigned to library questionnaires would be arrived at independently of ratings assigned by other committee members, without reference to a formal scoring system and without reference to ratings already tentatively decided on as part of the study. The results of this phase of committee assistance in the study will be discussed in Chapter V.

Scoring procedure The procedure for scoring the questionnaires is depicted in Table XV, Appendix D. The points

awarded in Sections I through VII were added to obtain the raw score. The raw score was then divided by the maximum possible score. The maximum possible score was 1,000 except in those instances in which Subsection II-A, periodicals and newspapers on required reading lists, and Subsection II-B, periodicals and newspapers on recommended reading lists, were not applicable. If both Subsection II-A and Subsection II-B were not applicable, the maximum possible score was 800. The division of the raw score by the maximum possible score provided the percentage score which was the basis of the adjectival rating assigned to the library. The percentage ranges corresponding to appropriate adjectival ratings were the following: ninety to one hundred percent, excellent; eighty to eighty-nine percent, very good; seventy to seventy-nine percent, good; sixty to sixty-nine percent, satisfactory; zero to fifty-nine percent, unsatisfactory.

#### IV. SUMMARY

Seventy-one base libraries, representing nine major air commands or separate operating agencies of the United States Air Force, were selected as participants in this study of base library support of college-level, off-duty education programs conducted by civilian colleges and universities. Approval to conduct the study was obtained from appropriate staff officials of Headquarters United States Air Force. A dual investigative procedure was used: (1) an examination of the educational programs offered at each of the

participating bases; (2) a survey, by questionnaire, of base library support of such programs.

Five professional librarians of national or regional prominence were asked to review the dissertation proposal. Their recommendations provided the basis for procedural changes incorporated in the evaluation system adopted for use. Additionally, five professional librarians who had not reviewed the dissertation proposal participated in the formulation of the scoring procedure, to ensure that reasonable consistency of professional judgment was reflected in this portion of the evaluative method. A pilot study was used in order to ascertain needed refinements in the library questionnaire.

Verification of the accuracy of questionnaire entries made by base librarians of ten Air Force bases, representing seven of the nine participating major air commands or separate operating agencies, was made by personal visit to the libraries and examination of library records and resources.

A single evaluation formula was used which made allowance for the differing requirement levels of (1) libraries supporting only undergraduate programs and (2) libraries supporting graduate programs or combinations of graduate and undergraduate programs.

## CHAPTER V

### FINDINGS

The result of the study will be considered from two stand-points (1) the initial, shorter, phase, involving the base education services function and (2) the second, more involved, phase, concerning the base libraries. The cooperation of the representatives of both elements of the study facilitated its completion.

#### I. SURVEY OF BASE EDUCATION PROGRAMS

On the basis of the education survey questionnaires completed by base education services officers, it was learned that during the fall term of 1967 a total of 868 undergraduate courses and 103 graduate courses were taught by representatives of civilian institutions during non-duty hours at the seventy-one Air Force installations within the continental United States which participated in the study. Forty-one bases offered only undergraduate programs; two offered only graduate courses; twenty-eight had both undergraduate and graduate courses available on the installation. Course enrollment in undergraduate programs was 16,678, and in graduate courses was 1,999. Table XXII, in Appendix D, depicts the individual base totals in these categories.

At the undergraduate level, heaviest enrollment was observed in courses in English composition, psychology, United States history and accounting. Table XXIII, in Appendix D, enumerates the sixteen undergraduate courses in which there were more than 225 enrollments in the fall term of 1967. This table also indicates the total number of bases at which each course was taught during the period surveyed. Among the four undergraduate courses which had more than 1,000 enrollments, English composition, with 2,285 enrollments, was taught at 52 Air Force bases; psychology, which had 1,757 enrollments, was offered at 40 bases; United States history, with 1,348 enrollments, was taught at 46 bases; accounting, which had 1,111 enrollments, was taught at 42 bases.

At the graduate level, with fewer bases participating and with subject areas considerably more varied than at the undergraduate level, less commonality of program was evident. Table XXIV, in Appendix D, lists the courses which had more than thirty enrollments, and it shows the number of bases at which these courses were offered. Graduate courses with highest enrollment were management, with 388 enrollments, which was offered at 9 Air Force bases; education, which had 283 enrollments and was taught at 12 bases; and economics, with 176 enrollments, which was offered at 4 bases.

Air Force education levels. The concern of the Air Force to provide undergraduate and graduate programs for its officers was

understandable, in view of the educational levels which prevailed at the time of this study. Table XXV, in Appendix D, shows the educational levels of Air Force line officers, by rank, as of 1967. Although considerable improvement is reflected in educational achievement since the time of the 1960 survey of the Air Force Educational Requirements Board (cf. Table IV, Appendix C), when approximately forty-five percent of Air Force line officers held college degrees, the basis of the off-duty education program of 1967 is recognizable. In the latter year approximately seventy-four percent of the line officers of the Air Force held baccalaureate or higher degrees, nevertheless, there were 10,648 officers who had attained only a high school education, 5,818 with less than two years of college and 13,694 with from two to four years of college. A total of 74,489 officers, or approximately sixty-three percent of the group, held baccalaureate degrees; 12,212, or approximately ten percent, had master's degrees, and 543, or approximately one-half of one percent, held doctoral degrees.<sup>1</sup> Air Force emphasis of college education as a pre-commissioning requirement is apparent in the relatively high percentage of academic degrees among lieutenants, 94.4 percent of whom had baccalaureate degrees and 4.1 percent of whom had earned master's degrees.<sup>2</sup>

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<sup>1</sup>Headquarters United States Air Force, Programs Division, Directorate of Personnel Plans, "Line Officers - by Educational Level and Grade, as of 7 Aug 67" (unpublished multilithed summary)

<sup>2</sup>Ibid., and Statement by Lieutenant Colonel Salvie L. Reid, Director of Military Personnel, Headquarters United States Air Force Academy, March 8, 1969, personal interview

Among 723,478 Air Force airmen in 1967, 29,119, or 4.0 percent, had not completed high school, 615,336, or 85.1 percent, were high school graduates only; 42,770, or 5.9 percent, had completed at least one year, but less than two years of college; 21,402, or 3.0 percent, had completed two, but less than three, years of college; 6,756, or 0.9 percent, had completed three or more years but had not earned a degree, 7,607, or 1.0 percent, had been awarded baccalaureate degrees; 234 had taken graduate-level courses but had not yet received a graduate degree, 197 held master's degrees, and 57 had earned doctor's degrees.<sup>3</sup>

Reading requirements. One of the most revealing findings of the education services phase of the study was the apparently irregular pattern of reading requirements of instructors of the off-duty education courses. Instructors at twelve of the seventy-one Air Force bases did not report having any reading requirements, other than the textbooks prescribed for the courses. Nor did they list any recommended readings of either books or periodicals and newspapers. Four of these twelve bases featured graduate programs, eight offered only undergraduate programs. In some instances, the instructors merely failed to respond to the survey questionnaire sent to them by the base education services officers,

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<sup>3</sup>Headquarters United States Air Force, Programs Division, Directorate of Personnel Plans, "Airmen Education Levels as of 30 Sep 67" (unpublished multilithed summary)

in the majority of cases, however, either the entry "N/A," for "not applicable," or the entry "None" was made on the survey form. From the standpoint of books alone, the reading requirement pattern was as follows

<u>Total Bases</u>	<u>Total Books on Required Reading Lists</u>
19	0
26	1-5
5	6-10
7	11-15
3	16-20
5	21-30
0	31-50
5	51-100
1	101-500

The following is a summary of the recommended readings of books among the bases surveyed:

<u>Total Bases</u>	<u>Total Books on Recommended Reading Lists</u>
21	0
13	1-5
5	6-10
3	11-15
3	16-20
2	21-30
5	31-50
7	51-100
10	101-500
2	501-800

The following is a summary of required readings of periodicals and newspapers

<u>Total Bases</u>	<u>Total Periodicals or Newspapers on Required Reading Lists</u>
50	0
13	1-5
6	6-10
1	11-15
1	16-20



Recommended readings of periodicals and newspapers are summarized as follows:

<u>Total Bases</u>	<u>Total Periodicals or Newspapers on Recommended Reading Lists</u>
28 . . . . .	0
17 . . . . .	1-5
10 . . . . .	6-10
5 . . . . .	11-15
2 . . . . .	16-20
5 . . . . .	21-30
3 . . . . .	31-50
1 . . . . .	51-100

Table XXVI, in Appendix D, shows the total required and recommended readings of books and of periodicals and newspapers for each base surveyed.

The twelve bases with no reported reading requirements or recommended readings offered 111 undergraduate courses and 9 graduate courses. The twenty-six bases with between one and five book titles on instructors' required reading lists had a total of 337 undergraduate courses and 18 graduate courses taught on the military installations concerned, or an average of approximately 14 college-level courses per base.

Table XXVI does not reflect the book titles which could not be identified or verified either through Books in Print or current issues of National Union Catalog or Cumulative Book Index or, in the case of United States Government documents, the issues of the Monthly Catalog of United States Government Publications for the period 1962 to the date the listing was checked. Had unidentifiable items been included in the summations, only eleven, rather than

twelve, bases would have been listed in Table XXVI as having had no reading requirements whatsoever, since base number 14 had one unverifiable book title on its required reading list. Approximately two thousand book titles could not be identified in the bibliographic sources of in-print book information. The record of verification was appreciably better in the case of periodicals and newspapers. Of 350 titles searched, 337 were verified.

Bibliographic data bank. The bibliographic data bank of verified titles proved somewhat less valuable than anticipated, as far as conserving time was concerned. Of 4,315 titles verified, 3,455, or 80.0 percent, appeared on the listing of only one Air Force base, 611 titles, or 14.1 percent, were on the reading lists of two bases, 159 titles, or 3.7 percent, occurred on three lists. Only 93 titles, or 2.2 percent, occurred on four or more lists. The following titles were on the lists of six bases: (1) Davis, Ralph C., Fundamentals of Top Management (Harper, 1951), (2) Drucker, Peter F., The Practice of Management (Harper, 1954), (3) Galbraith, John K., The Affluent Society (Houghton, 1958), (4) Morgan, Clifford T., and R. A. King, Introduction to Psychology (McGraw, 1966), and (5) White, Theodore H., The Making of the President, 1960 (Atheneum, 1961). The following title was on the lists of seven bases: Koontz, Harold D., and C. O'Donnell, Principles of Management: An Analysis of Managerial Functions (McGraw, 1964). Arthur M. Schlesinger's The Age of Jackson (Little, 1945) appeared on eight lists, and Ernest R. Hilgard and R. E. Atkinson's Introduction

to Psychology (Harcourt, 1967) occurred on the lists of nine bases

The bibliographic data bank of periodical and newspaper titles proved more productive than that of book titles. Although a total of 232 periodical or newspaper titles, or 68.9 percent, occurred only once, 51, or 15.1 percent, occurred twice; 16, or 4.8 percent, appeared on the lists of three bases; 5, or 1.5 percent, were on the lists of four bases; and 22 titles, or more than 6.5 percent, occurred on the lists of five or more bases. Table XXVII, in Appendix D, lists the titles which appeared on the reading lists of six or more of the bases surveyed. It is worthy of note that twenty-five of the seventy-one bases in the study had no periodicals or newspapers on either required or recommended reading lists of instructors. Thus U. S. News and World Report, which was on the reading lists of eighteen bases, or 25.4 percent of the seventy-one bases in the study, was on the lists of 39.1 percent of the bases which actually reported required or recommended readings of periodicals or newspapers.

Assistance to base libraries. Base education services officers at thirty-two of the installations surveyed cited some form of either direct or indirect assistance to the base library by one or more of the civilian institutions affiliated with the off-duty education program. Sixteen of the seventy-one bases had more than one institution conducting off-duty education programs. Of these sixteen, thirteen bases had two college or university

programs, and three bases had three. Several institutions served more than one Air Force base. American University and George Washington University were sponsors of two base programs; Florida Southern University was affiliated with three bases; Chapman College had programs at four bases, and the University of Southern California was associated with off-duty education programs at seven bases, including four of the bases at which Chapman College also had programs.

Responses to the education program survey, with respect to special assistance extended to the base library by the college or university conducting off-duty courses, are summarized in Table XXVIII, Appendix D. At two of the bases, the college or university library operated a branch in the classroom area where courses were taught on the base. In one instance the university extension center maintained a library in a nearby public library. At ten bases the college or university library placed on deposit in the base library a reserve shelf of library materials. At three bases instructors or administrators obtained needed library materials from the university library. The most common service provided, however, was that in which at least one of the affiliated colleges or universities located within fifty miles of the base made available to Air Force students of the off-duty education program full library resources and services. This practice was reported by fourteen bases. At two bases the university library bookmobile provided access to "reference only" books. In two instances

university instructors supplied books and other materials from their personal libraries. Base education services officers at nine bases reported that they coordinated the purchase of library materials by the base library in support of the college or university program.

## II. SURVEY OF BASE LIBRARIES

It is appropriate to preface the report on Air Force base libraries supporting off-duty education programs with two observations which are pertinent to the findings. First, the typical base library has a broad mission, one which involves support of reading programs for preschool, elementary and high school children, programs of professional reading for Air Force officers and airmen, recreational reading needs of military personnel, dependents and civilian employees; and the technical reading requirements of the base staff judge, advocate, or legal, office and other specialized agencies involved in the operation of the base. The responsibility for supporting off-duty education programs at the undergraduate or graduate level poses for the librarian the task of making provision in his budget for a relatively expensive investment in library materials in behalf of a group of patrons who may comprise a relatively small portion of the total clientele of the library. In 1967 the following were the average per-volume prices of book titles in eight categories closely approximating the greatest curricular interests of Air Force students: (1) biography, \$8.52, (2) business, \$9.77, (3) economics, \$8.65, (4) education, \$5.61,

(5) history, \$9.02; (6) general literature, \$6.84; (7) technology, \$12.86; and (8) science, \$12.15.<sup>4</sup> The second observation is that this study was designed to evaluate base libraries only in regard to their role as supporters of specific undergraduate and graduate programs of off-duty education, and not in relation to their total function of mission support.

Library questionnaire results All seventy-one questionnaires forwarded through the offices of the command librarians to the base libraries under their respective jurisdictions were completed and returned. The findings were considered first in terms of the entire group and then in terms of subgroups. The first set of subgroups consisted of the major air commands or separate operating agencies, the second comprised (1) those libraries supporting only undergraduate programs and (2) those libraries supporting either graduate programs only or a combination of graduate and undergraduate programs.

Table XXIX, in Appendix D, depicts the results of the evaluation of the entire group of libraries. One library, number 29, received a rating of excellent. This library, with its collection of 235,000 books, 55,000 bound journals, 4,000 subscriptions, 500,000 documents and technical reports and 6,000

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<sup>4</sup>"1967 in Review: Statistics, News, Trends," Publishers' Weekly, The Book Industry Journal, CXCI (January 29, 1968), 51

reels of microfilm, is indeed atypical of base libraries.<sup>5</sup> Its particular mission is "to provide educational and research library services to the . . . schools, colleges and tenant units of the Air University . . ."<sup>6</sup> Because of its special mission of supporting such professional school programs as the Squadron Officer Course, the Air Command and Staff College and the Air War College, its resources dwarf those of other libraries included in the study. Its professional staff consisted of thirty-four librarians at the time of this study, whereas a typical base library had only one librarian. Its budget for library materials was approximately \$100,000 a year, ten times greater than most base library budgets reported in this study. It gave evidence of being an ably directed, well-organized library, fully capable of supporting the many undergraduate and graduate programs linked to its wealth of resources. Because this library met the criteria of the study, it was included, even though its preeminence among the seventy-one libraries was reasonably predictable at the outset. As indicated in Table XXIX, six libraries received the rating of good, fourteen were evaluated as satisfactory, and fifty were rated unsatisfactory.

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<sup>5</sup>Air University Library, "Research Libraries in the Air Force," June 1968 (Multilithed.)

<sup>6</sup>"Air University Library Guide to Library Services, 1968," in Headquarters 3800th Air Base Wing, A Guide to Learning (Maxwell Air Force Base, Alabama, 1968), p. 17.

Table XXX, in Appendix D, presents a summary of library questionnaire percentage scores, by major air command and separate operating agency. Besides listing the total number of libraries which received percentage scores within the range appropriate to each of the adjectival ratings used in the study, Table XXX shows the mean and median scores achieved by libraries in each of the major air commands and separate operating agencies. It also lists these data for the entire group of participating libraries.

Among the twelve libraries of Aerospace Defense Command, the distribution of percentage scores was as follows:

<u>70-79 Percent</u>	<u>60-69 Percent</u>	<u>0-59 Percent</u>	<u>Mean</u>
1	1	10	47.3

Air Force Logistics Command, with three participating libraries, had the following distribution of percentage scores:

<u>60-69 Percent</u>	<u>0-59 Percent</u>	<u>Mean</u>
2	1	58.0

The following represents the percentage score distribution among the four participating libraries of Air Training Command:

<u>60-69 Percent</u>	<u>0-59 Percent</u>	<u>Mean</u>
1	3	56.8

The Air University, with one participating library, achieved a score in the 90 to 100 percent range. The two libraries of Headquarters Command had scores within the following percentage range:

<u>60-69 Percent</u>	<u>Mean</u>
2	65.5



Percentage range distribution among the four Military Airlift Command libraries was as follows:

<u>70-79 Percent</u>	<u>60-69 Percent</u>	<u>0-59 Percent</u>	<u>Mean</u>
1	1	2	57.5

Strategic Air Command reflected the following percentage range distribution in the scores received by its twenty-eight participating libraries:

<u>70-79 Percent</u>	<u>60-69 Percent</u>	<u>0-59 Percent</u>	<u>Mean</u>
2	4	22	49.8

The percentage scores of the sixteen Tactical Air Command libraries showed the following distribution.

<u>70-79 Percent</u>	<u>60-69 Percent</u>	<u>0-59 Percent</u>	<u>Mean</u>
2	3	11	56.3

The one participating library of United States Air Force Security Service was awarded a score in the 0 to 59 percent range.

Of the seventy-one libraries, one scored in the ninety to one hundred percent range, none scored in the eighty to eighty-nine percent range, six had scores between seventy and seventy-nine percent, fourteen were in the sixty to sixty-nine percent range, and fifty had scores between zero and fifty-nine percent. The mean for the group was 52.9 percent.

The second major subgrouping of libraries was by level of academic program supported. As reflected in Table XXXI, Appendix D, there were forty-one libraries which supported only undergraduate programs and thirty libraries which supported only graduate programs or combinations of graduate and undergraduate

programs. For the forty-one libraries supporting only undergraduate programs, the mean score was 54.8 percent. The distribution of scores was as follows:

<u>70-79 Percent</u>	<u>60-69 Percent</u>	<u>0-59 Percent</u>
5	9	27

For the thirty libraries supporting graduate programs only or combinations of graduate and undergraduate programs, the mean score was 50.4 percent. The following is a summary of the distribution of scores:

<u>90-100 Percent</u>	<u>70-79 Percent</u>	<u>60-69 Percent</u>	<u>0-59 Percent</u>
1	1	5	23

As a means of studying the basis of the overall percentage scores which resulted in the adjectival ratings assigned, selected subsections within the seven major resource and service elements were reviewed and tabulated. The results were then summarized according to major air command and separate operating agency, as well as for the entire group of libraries.

Book collections. Table XXXII in Appendix D, provides a tabulation of percentages of book titles on required reading lists which were in the collections of the libraries surveyed. Inasmuch as education services officers of nineteen bases reported having no required readings of books, the data of Table XXXII assume less conclusive significance than they would have if the reading requirements of instructors had been uniformly high. The following summation shows the number of libraries whose collections

contained the indicated percentages of book titles from the required reading lists of instructors:

<u>Total Libraries</u>	<u>Percentage of Required Book Titles in the Collection</u>
8	90-100
4	80-89
1	70-79
10	60-69
3	50-59
4	40-49
2	30-39
5	20-29
15	0-19
19	Not applicable

A tabulation of percentages of book titles on recommended reading lists which were in the collections of the libraries studied is found in Table XXXIII, Appendix D. Insofar as recommended readings were concerned, there were no listings by instructors reported at twenty-one of the bases in the study. This factor, as in the case of the required readings, placed the resulting data in less clear perspective than would have been the case had the basis of the evaluation of this particular facet been broader. The following is a representation of the number of libraries whose collections contained the indicated percentages of book titles from the recommended reading lists of instructors.

<u>Total Libraries</u>	<u>Percentage of Recommended Book Titles in the Collection</u>
7	80-100
4	60-79
8	40-59
13	20-39
10	10-19
8	0-9
21	Not applicable

The data from Table XXXII, Percentages of Book Titles on Required Reading Lists in Libraries Surveyed, afford the basis for the following summary.

<u>Number of Bases with Required Reading Lists</u>	<u>Libraries with 70-100 Percent of Book Titles</u>	<u>Libraries with 40-69 Percent of Book Titles</u>	<u>Libraries with 0-39 Percent of Book Titles</u>
52	13	17	22

Similarly, data from Table XXXIII, Percentages of Book Titles on Recommended Reading lists in Libraries Surveyed, provide the basis for the following recapitulation.

<u>Number of Bases with Recommended Reading Lists</u>	<u>Libraries with 60-100 Percent of Book Titles</u>	<u>Libraries with 40-59 Percent of Book Titles</u>	<u>Libraries with 0-39 Percent of Book Titles</u>
50	11	8	31

Implicit in these findings are the possibilities of (1) lack of communication between the civilian institutions and the Air Force base libraries (2) budget limitations on the part of the libraries and (3) lack of clearly specified responsibility for the base libraries with regard to this form of support. Librarians at eight of the ten Air Force bases visited during the course of verifying the accuracy of questionnaire data indicated varying degrees of inadequate communication between the civilian institution and the base library. The most common shortcoming was the reported failure on the part of civilian instructors to make known their requirements for the purchase of materials by the base library, or to make known such requirements in a timely fashion. An additional suggestion of

weakness of communication may be deduced from two results relating to a questionnaire sent to representatives of the civilian institutions affiliated with the seventy-one bases included in the study. First is the fact that no reply was received from institutional representatives at thirty-one bases. Second is the fact that seventeen of the forty returned questionnaires had answers of "No" or "Unknown" to the following question which was designed to disclose basic communication between the two agencies:

During the fall term of the academic year 1967-68, did your institution work closely with the base librarian in establishing and operating an inter-library loan program to supplement the resources of the base library?

The limitations of many base library budgets will be seen in more detail during a review of the fund allocations of the libraries studied, encompassing fiscal years 1967 and 1968, later in the chapter (cf. Tables L and LI, Appendix D). The lack of a clearly defined role of base library support of college-level, off-duty education programs is evidenced in the contracts between the Air Force and the civilian institutions, as well as in the basic directive governing Air Force Library Service, Air Force Regulation 212-1.<sup>7</sup>

Table XXXIV, Appendix D, is a representation of the minimum number of book titles available in each major curriculum-related subject category in the collections of base libraries

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<sup>7</sup> Supra, p. 40; United States Department of the Air Force, Air Force Regulation 212-1, "Air Force Library Service," March 22, 1965.

supporting only undergraduate programs. The findings are summarized as follows:

<u>Total Libraries</u>	<u>Minimum Book Titles per Major Curriculum-Related Subject Category</u>
4 . . . . .	150 or more
2 . . . . .	125-149
13 . . . . .	100-124
0 . . . . .	75-99
6 . . . . .	50-74
11 . . . . .	25-49
5 . . . . .	0-24

From this summary it can be seen that twenty-two of the forty-one libraries involved in supporting only undergraduate programs were in the lower half of the scale.

Table XXXV depicts the minimum number of book titles available in each major curriculum-related subject category in the collections of base libraries supporting only graduate programs or combinations of graduate and undergraduate programs. The following is a summary of the results in this part of the study

<u>Total Libraries</u>	<u>Minimum Book Titles per Major Curriculum-Related Subject Category</u>
10 . . . . .	150 or more per undergraduate category and 180 or more per graduate category
1 . . . . .	125-149 per undergraduate category and 150-179 per graduate category
4 . . . . .	100-124 per undergraduate category and 120-149 per graduate category
1 . . . . .	75-99 per undergraduate category and 90-119 per graduate category
4 . . . . .	50-74 per undergraduate category and 60-89 per graduate category
6 . . . . .	25-49 per undergraduate category and 30-59 per graduate category
4 . . . . .	0-24 per undergraduate category and 0-29 per graduate category

Fifteen of the thirty libraries are represented in the upper half of the foregoing summation. Of the ten libraries grouped at the highest level, two supported only graduate programs, not a combination of graduate and undergraduate programs.

The aspect of current book titles, rather than total book titles, is represented in Table XXXVI, in Appendix D, with respect to base libraries supporting only undergraduate programs. The term current was used to describe books bearing a copyright date of 1962 or later at the time of the study. This was one of the factors of evaluation in which the libraries were generally weak, as is seen in the following summary.

<u>Total</u> <u>Libraries</u>	<u>Minimum Current Book Titles</u> <u>per Major Curriculum-Related</u> <u>Subject Category</u>
0 . . . . .	100 or more
0 . . . . .	90-99
0 . . . . .	80-89
0 . . . . .	70-79
0 . . . . .	60-69
2 . . . . .	50-59
1 . . . . .	40-49
6 . . . . .	30-39
10 . . . . .	20-29
22 . . . . .	0-19

As in the case of required and recommended book titles from the reading lists of instructors, two possibilities are implicit in this findings: (1) inadequate communication between representatives of the educational programs and representatives of the libraries and (2) inadequate financial resources.

The minimum current book titles available in each major curriculum-related subject category, among the thirty base

libraries concerned with graduate programs or combinations of graduate and undergraduate programs, are shown in Table XXXVII, in Appendix D. The following is a representation of this aspect of the study

<u>Total Libraries</u>	<u>Minimum Current Book Titles per Major Curriculum-Related Subject Category</u>
3	100 or more per undergraduate category and 120 or more per graduate category
0	90-99 per undergraduate category and 108-119 per graduate category
1	80-89 per undergraduate category and 96-107 per graduate category
0	70-79 per undergraduate category and 84-95 per graduate category
0	60-69 per undergraduate category and 72-83 per graduate category
1	50-59 per undergraduate category and 60-71 per graduate category
3	40-49 per undergraduate category and 48-59 per graduate category
5	30-39 per undergraduate category and 36-47 per graduate category
5	20-29 per undergraduate category and 24-35 per graduate category
12	0-19 per undergraduate category and 0-23 per graduate category

Twenty-six of the thirty libraries are thus shown to be in the lower part of the scale in this aspect of the book collection. Weaknesses in book collections, as seen in tables XXXII through XXXVII, and as summarized above were largely responsible for the adjectival rating of unsatisfactory received by fifty of the seventy-one Air Force base libraries studied.

Periodical and newspaper collections. Table XXXVIII, in Appendix D, shows the percentages of periodical and newspaper



titles, from required reading lists, available in base library collections. At fifty bases there were no required reading lists of periodicals or newspapers. The following summation represents the number of libraries whose collections contained the indicated percentages of periodical and newspaper titles from the required reading lists of instructors

<u>Total Libraries</u>	<u>Percentage of Required Periodical and Newspaper Titles in the Collection</u>
4 . . . . .	90-100
1 . . . . .	80-89
3 . . . . .	70-79
3 . . . . .	60-69
3 . . . . .	50-59
1 . . . . .	40-49
0 . . . . .	30-39
1 . . . . .	20-29
5 . . . . .	0-19
50 . . . . .	Not applicable

The large number of bases at which no required readings of periodicals and newspapers were reported to exist diminished the usefulness of Table XXXVIII as an interpretive instrument. Even so, it may be noted that, in contrast to the record of libraries with required reading lists of book titles, in which only twenty-six of fifty-two libraries had as many as one-half of the prescribed titles, there were, in regard to libraries with required lists of periodical and newspaper titles, fourteen of twenty-one libraries which had at least one-half of the prescribed titles. It is recognized that fewer titles were involved in the case of the periodicals and newspapers, compared to the number of book titles, and the cost of attaining the fifty percent level in the

library holdings would be considerably less in regard to periodicals and newspapers.

Table XXXIX, in Appendix D, portrays the percentages of periodical and newspaper titles, from recommended reading lists, available in libraries studied. At twenty-eight of the seventy-one bases, instructors reported no recommended readings of periodicals or newspapers. The following is a representation of the number of libraries whose collections contained the indicated percentages of periodical and newspaper titles from the recommended reading lists of instructors:

<u>Total Libraries</u>	<u>Percentage of Recommended Periodical and Newspaper Titles in the Collection</u>
9 . . . . .	80-100
4 . . . . .	60-79
11 . . . . .	40-59
11 . . . . .	20-39
3 . . . . .	10-19
5 . . . . .	0-9
28 . . . . .	Not applicable

It can be seen from this summary that, of the forty-three base libraries to which recommended reading lists of periodicals and newspapers were applicable, nineteen had in their collections less than forty percent of the recommended titles.

Collections of indexes and abstracts. Fifty-five of the seventy-one libraries had in their collections an unabridged edition of Readers' Guide to Periodical Literature, as reflected in Table XL, Appendix D. Thirty-three of them had substantially unbroken sets of this title, covering a three-year period or more. Only forty-four

base libraries had the Air University Library Index to Military Periodicals, despite the fact that it was available to requesting base librarians without charge. It is possible that some librarians were not aware that it might be so readily obtained. Others may have felt that the usefulness of this index was limited when only a few military periodicals were held by the library. Only two libraries subscribed to Social Sciences and Humanities Index; nine, however, subscribed to Applied Science and Technology Index. Only three subscribed to PAIS (Public Affairs Information Service). There are two factors to which may be attributed the apparently low interest in these last three indexes. The first is that of cost. The average base library had an annual budget of approximately \$9,279 in fiscal year 1968 (cf. Table LI, Appendix D). Support of the academic program being pursued by a minority of the total base population being served by the library had to be weighed carefully from the standpoint of cost. The estimated annual cost of a subscription to Social Sciences and Humanities Index is \$141.00; to Applied Science and Technology Index, \$233.00; and to PAIS, \$100.00.<sup>8</sup> A librarian purchasing such subscriptions would generally look upon them as a continuing commitment, for the worth of such periodical indexes is based in large measure on their continued availability to the patron. The

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<sup>8</sup>These cost estimates are based on the comments of Gilbert L. Campbell, Chief, Acquisitions Division, United States Air Force Academy Library, on December 13, 1968, and a copy of United States Air Force Academy Library Request for Purchase Number LIB 69-P-505, dated October 23, 1968.

assurance of availability of funds over a period of years would be a factor, therefore, in a decision to buy these indexes, as would the availability of storage space.

The second consideration underlying the purchase of any of the additional indexes would be that of likely need or use. This would be a matter of professional judgment on the part of the librarian and would probably be based on the particular educational programs offered on or near the Air Force installation concerned, as well as on the mission of the organizations served by the library.

In Table XLI, Appendix D, the percentages of required specialized indexes or abstracts in the collections of base libraries supporting graduate programs are represented. The following summation shows the number of libraries whose collections contained the indicated percentages of specialized indexes and abstracts appropriate to the particular graduate courses taught at the individual Air Force bases concerned:

<u>Total Libraries</u>	<u>Percentage of Specialized Indexes and Abstracts in the Collection</u>
3 . . . . .	90-100
0 . . . . .	80-89
0 . . . . .	70-79
0 . . . . .	60-69
1 . . . . .	50-59
0 . . . . .	40-49
0 . . . . .	30-39
1 . . . . .	20-29
0 . . . . .	10-19
0 . . . . .	1-9
24 . . . . .	0
1 . . . . .	Not applicable

A specialized index was not appropriate at one of the bases where a combination of graduate and undergraduate programs was in effect. The graduate course was urban geography, for which an appropriate specialized index or abstract was not included in the list of specialized bibliographic tools. The small number of libraries having a significant percentage of specialized indexes and abstracts can probably be attributed to the factors of cost and likely need, especially in instances in which two or more such indexes were involved. When reasonable assurance of the repeated offering of a particular graduate course or discipline over a period of years cannot be obtained, the librarian may consider the purchase of such periodical indexes or abstracts to be unwise.

Dictionary collections. The next part of the questionnaire concerned dictionaries. Of the seventy-one libraries, sixty-six had in their collections Webster's Third New International Dictionary. Twenty-nine had a copy of Random House Dictionary of English Usage; fifty-four had Webster's New International Dictionary, second edition. Information on this facet of the study is contained in Table XLII, in Appendix D. All libraries except one had at least one unabridged dictionary. Thirteen had one; thirty-four had two, and twenty-three had three unabridged dictionaries in their collections.

In Table XLIII, Appendix D, are shown the percentages of required specialized dictionaries in the collections of base libraries supporting graduate programs. The following summation identifies the number of libraries whose collections contained the indicated

percentages of specialized dictionaries appropriate to the particular graduate courses taught at the bases concerned:

<u>Total Libraries</u>	<u>Percentage of Specialized Dictionaries in the Collection</u>
9 . . . . .	90-100
0 . . . . .	80-89
1 . . . . .	70-79
1 . . . . .	60-69
1 . . . . .	50-59
0 . . . . .	40-49
0 . . . . .	30-39
0 . . . . .	20-29
0 . . . . .	10-19
0 . . . . .	1-9
10 . . . . .	0
8 . . . . .	Not applicable

From this summary can be seen the fact that, among the thirty libraries involved in the support of graduate programs, specialized dictionaries were applicable to the collections of only twenty-two. Twelve of these twenty-two libraries had collections which contained at least fifty percent of the specialized dictionaries. The factors of (1) communication between the librarians and representatives of the educational institutions, (2) cost of the specialized dictionaries and (3) perception of existing and continuing need may have been underlying considerations in the failure of a relatively substantial number of base librarians to acquire these dictionaries.

Encyclopedia collections. Table XLIV presents the total number of libraries with current editions of Encyclopaedia Britannica Encyclopedia Americana and Collier's Encyclopedia. Of the seventy-one libraries surveyed, forty-eight had a 1962 or later edition of Encyclopaedia Britannica, forty-nine had a 1962

or later edition of Encyclopedia Americana; and forty-eight, a 1962 or later edition of Collier's Encyclopedia. Only three libraries did not have at least one of these. Fourteen had only one; twenty-seven had two of them, twenty-seven had all three. Each of the three libraries without a current edition of any of these sets of encyclopedias reported having a 1960 edition of Encyclopaedia Britannica.

With fewer encyclopedias than either indexes or dictionaries, it is not surprising that among the thirty base libraries supporting graduate programs there were seventeen in the "not applicable" category, indicating that no specialized encyclopedia appropriate to a graduate course taught at the base where the library was located had been identified as required. The following is a representation of the number of libraries whose collections contained the indicated percentages of specialized encyclopedias appropriate to the graduate courses taught at the base concerned:

<u>Total Libraries</u>	<u>Percentage of Specialized Encyclopedias in the Collection</u>
1 . . . . .	90-100
0 . . . . .	80-89
0 . . . . .	70-79
0 . . . . .	60-69
2 . . . . .	50-59
0 . . . . .	40-49
0 . . . . .	30-39
0 . . . . .	20-29
0 . . . . .	10-19
0 . . . . .	1-9
10 . . . . .	0
17 . . . . .	Not applicable

Cost would be one of the basic considerations to be weighed by a base librarian prior to the purchase of one or more sets of

specialized encyclopedias, and this consideration may well have been the predominant one in regard to this segment of the library collection.

Professional reference service. Professional reference service will be considered first within the framework of libraries supporting only undergraduate programs and then from the standpoint of those supporting graduate programs. Table XLVI, in Appendix D, shows data pertaining to professional reference service available in the forty-one libraries supporting only undergraduate programs. The following summation, based on Table XLVI, affords a useful insight into the quality of this library resource:

<u>Total</u> <u>Libraries</u>	<u>Hours of Professional Reference Service</u> <u>Available Each Week</u>
6 . . . . .	40 or more, including at least 12 after normal duty hours
1 . . . . .	40 or more including at least 9 after normal duty hours
10 . . . . .	40 or more, including at least 6 after normal duty hours
4 . . . . .	40 or more, including at least 3 after normal duty hours
10 . . . . .	40 or more, not including time after normal duty hours
5 . . . . .	20 to 39 hours
5 . . . . .	0 to 19 hours

The fact that twenty of these forty-one libraries offered no service after normal duty hours can be explained in part by the fact that, with only one librarian authorized at most base libraries (cf. Table XLVIII Appendix D), the librarian may recognize a requirement to be present in the library during the normal duty day in order to supervise other employees and to conduct business with other offices on the military installation.



Table XLVII, in Appendix D, represents professional reference service available in base libraries supporting graduate programs only or a combination of graduate and undergraduate programs. The following is a recapitulation of data from Table XLVII:

<u>Total</u> <u>Libraries</u>	<u>Hours of Professional Reference Service</u> <u>Available Each Week</u>
8 . . . . .	40 or more, including at least 12 after normal duty hours
1 . . . . .	40 or more, including at least 9 after normal duty hours
8 . . . . .	40 or more, including at least 6 after normal duty hours
1 . . . . .	40 or more, including at least 3 after normal duty hours
7 . . . . .	40 or more, not including time after normal duty hours
4 . . . . .	20 to 39 hours
1 . . . . .	0 to 19 hours

Lack of qualifications as a professional librarian (cf. Appendix A, Glossary), on the part of the incumbent of the librarian position at base library number 40, caused one library of this group to be placed in the "0 to 19 hours" category. The fact that twelve of the thirty libraries in this group provided no professional reference assistance after normal duty hours can be related to the authorization of only one librarian at most of the libraries studied (cf. Table XLVIII, Appendix D).

As noted in Table XLVIII, sixty of the seventy-one libraries were authorized one professional librarian. The total authorizations of librarian positions at the base libraries which participated in the present study are summarized below:

Total Libraries      Professional Librarians Authorized

1	.	.	.	.	.	.	.	.	.	34
1	.	.	.	.	.	.	.	.	.	4
1	.	.	.	.	.	.	.	.	.	3
7	.	.	.	.	.	.	.	.	.	2
60	.	.	.	.	.	.	.	.	.	1
1	.	.	.	.	.	.	.	.	.	0

The Air University Library, which is not a typical base library, and which supports a system of Air Force professional schools in addition to graduate programs offered by civilian universities, was authorized thirty-four professional librarians.<sup>9</sup> The base library with four librarians was an Air Training Command base at which the base librarian had under her supervision, in addition to other members of the staff, a technical librarian with responsibility for a broad collection of technical report literature.<sup>10</sup> This library and the library which was authorized three librarians were involved in supporting graduate programs. Of the seven libraries having an authorization of two librarians, two were concerned with the support of undergraduate programs only, and five were concerned with supporting graduate programs. The one library without an authorized librarian was that of a remote-site radar station which received library support from an Aerospace Defense Command library service center.<sup>11</sup> In

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<sup>9</sup>Supra, pp. 158-159.

<sup>10</sup>Statement of Ruth D. Schaar, Librarian, Keesler Air Force Base, Mississippi, during a telephoned interview on September 16, 1968.

<sup>11</sup>Information about the Fourth Air Force Library Service Center and about Condon Air Force Station, which has one of the twenty-four field libraries served by the Center, was obtained during an October 10, 1967, conversation with Lucia Gordon, Command Librarian of Aerospace Defense Command, who stated that no field library served by an Aerospace Defense Command Library service center was authorized a librarian.

only one instance, that of base library number 2, did a library which had more than one professional librarian authorized and which supported a graduate education program, report the lack of available professional reference service after normal duty hours.

Supplementary data. In regard to supplementary data on the questionnaire the librarians were not asked to include the total number of volumes in their libraries. Because a substantial portion of a typical base library, with its requirement of supporting preschool, elementary and high school, and family reading needs of various types, including recreational and vocational, was recognized as not being related to college-level academic programs, the total number of volumes was not considered to be a practical statistic in estimating the resources of the base library in terms of its mission of academic support. More pertinent would be such items as possession of microtext materials and the availability of other library facilities.

Of the seventy-one libraries, only four reported having microtext materials. Two of these, one in Tactical Air Command and one in Air Training Command, supported only undergraduate programs, and the other two were concerned with graduate programs. One of the latter was the Air University Library, and the other was a Headquarters Command library. Only one library the one represented by questionnaire number 4, reported having duplicate copies of more than fifty percent of the books on required reading lists. This library had seven copies of the one book which appeared on its required reading list.

As shown in Table XLIX, Appendix D, the mean seating capacity for all libraries surveyed was seventy-seven. In regard to the number of square feet of reading area, the mean for all libraries surveyed was 4,274 square feet. Floor space of a base library is determined, as a general rule, by the number of military personnel authorized. A base complement of between 2,501 and 4,000 officers and airmen, for example, is usually authorized a base library with 6,000 square feet of floor space.<sup>12</sup> The guidelines do not specify the portion to be devoted to reading area or the portion to be used as a work area. Aside from the Air University Library, which has been identified as not belonging to the typical category of base library, the major air command with the largest physical plants for libraries was the Air Training Command, whose libraries reported a mean seating capacity of 119 and a mean square footage of reading area of 6,175. Air Training Command bases, with their numerous technical schools and sizable enrollments in such schools, not only have the base populations needed to justify larger library facilities, but they also can be expected to have a considerable number of officers and airmen on temporary duty who, while enrolled in the technical schools, use library resources for information related to technical course work and who probably find it convenient to use the base library, rather than their temporary living quarters, as a study area.

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<sup>12</sup>United States Department of the Air Force, Air Force Manual 86-4, "Standard Facility Requirements," September 1, 1961, Table 74-22, page 184.

Financial aspects Although base library budget totals alone were recognized as not providing conclusive evidence of support of off-duty education since the librarian could be expected to consider numerous other requirements as well, an awareness of the financial resources of the average base library affords some understanding of the likely range of support available for off-duty education. A base library with a total budget allocation of \$569 in fiscal year 1967 and \$369 in fiscal year 1968, as was the case with base library number 14, could hardly be expected to have made a significant number of purchases of college-level reference materials in relation to the course enrollment total of 195. Table L, Appendix D, shows the fiscal year 1967 budget allocation for each of the seventy-one libraries surveyed. As a basis of comparing the possible impact of these funds on the education program, the course enrollment totals for fiscal year 1968 were divided into the total budget figures, thereby producing the dollar allocation per course enrollment for each base. In Table LI, Appendix D, the fiscal year 1968 budget allocations are similarly represented with the 1968 course enrollment totals divided into the total budget allocation for that fiscal year, in order to produce the dollar allocation per course enrollment.

In fiscal year 1967 the seventy-one libraries received \$395,490 in appropriated funds and \$258,510 in nonappropriated funds, or a total of \$654,000. The mean was approximately \$9,211. When the total course enrollment for the following fiscal year was divided into the total fiscal year 1967 budget allocation, the resulting

dollar allocation per course enrollment was \$35.02. In fiscal year 1968 the same libraries were allocated \$412,978 in appropriated funds and \$245,705 in nonappropriated funds, or a total of \$658,683. These totals are shown in Table LI, Appendix D. The mean, \$9,277 was not substantially different from that of the preceding year (\$9,211). The mean dollar allocation per course enrollment was \$35.27. The following is a tabulation showing the number of libraries in each of fourteen ranges of financial resources available for the purchase of books and other library materials during fiscal year 1968

<u>Total Libraries</u>	<u>Budget Range</u>
1	\$ 100 to \$500
0	\$ 500 to \$1,000
3	\$ 1,001 to \$2,000
4	\$ 2,001 to \$3,000
4	\$ 3,001 to \$4,000
7	\$ 4,001 to \$5,000
8	\$ 5,001 to \$6,000
12	\$ 6,001 to \$8,000
14	\$ 8,001 to \$10,000
14	\$10,001 to \$15,000
1	\$15,001 to \$20,000
1	\$20,001 to \$30,000
1	\$30,001 to \$50,000
1	\$50,001 to \$100,000

Although fourteen libraries received allocations of between \$8,001 and \$10,000 and fourteen libraries had allocations of between \$10,001 and \$15,000 the median allocation among the seventy-one libraries in fiscal year 1968 was \$7,360

The manner of expenditure of the budget was not a factor in the evaluation of the libraries, inasmuch as Air Force Regulation 212-1 did not require the base librarians to maintain records which

reflected the amounts spent for the off-duty education program as distinguished from other expenditures. One base library, number 14 was allocated no appropriated funds in either fiscal year 1967 or fiscal year 1968. The command librarian responsible for monitoring the operation of this base library indicated that two factors seemed to have influenced this lack of appropriated funds: (1) there had been a weakness of communication between the base librarian and the local headquarters which considered annual budget requirements, and (2) library materials not being a line item in the budget for the Air Force base had been identified only as expendable supplies and had been deleted along with other items trimmed from the appropriated fund budget at the base concerned.<sup>13</sup>

Additional library resources. Table LII, in Appendix D, lists library resources available, at no cost to Air Force students, within fifty miles of the base libraries studied. Twenty-nine of the base librarians reported that the library of the civilian institution offering courses on the base also provided free library services at its college or university campus within fifty miles. At seventeen other bases the library of a college or university other than the one offering courses on the base, and located within fifty miles of the base was available without cost to the student enrolled in the off-duty education program. At nineteen of the bases the only available free

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<sup>13</sup> Statement of Lucia Gordon on October 14, 1968, personal interview.

library within fifty miles of the base was a public library. Six base librarians reported no resources available within fifty miles without cost to students.

The individual subsections of the questionnaire provided important insight into various resources and services that characterized the seventy-one libraries representing nine major air commands and separate operating agencies. Although one of the eligible major air commands, Air Force Systems Command, was not a participant in the study, a limited amount of information related to five of its base libraries was acquired. It was treated separately and is contained in Appendix G.

Committee test of questionnaire evaluation. The five librarians who had participated in the three-phase formulation and development of the point scoring system were asked, as the final step of Phase III, to designate adjectival ratings for seven base library questionnaires. The committee members did not have access to the scoring system used in the study nor were they aware of the point values allocated to any of the seven resource and service elements encompassed in the evaluation of each library. Moreover, each adjectival rating would be arrived at independently of those assigned by other committee members and without reference to ratings already tentatively decided on as part of the study.

In the choice of questionnaires for evaluation by the committee members, questionnaire number 12, which had received a score of fifty-seven percent, represented the upper level of



unsatisfactory. Questionnaire number 54, with a percentage score of sixty represented the lower limit of satisfactory, whereas questionnaire number 24, which had a percentage score of sixty-eight represented the upper level of satisfactory. Three questionnaires with percentage scores at the lower level of good were included as a means of imposing a heightened requirement for discrimination in committee evaluation of the questionnaires. The three questionnaires in the good category were number 34, with a percentage score of seventy, and numbers 9 and 59, each of which had received a percentage score of seventy-two. No questionnaire in the study had been given a rating of very good. Only one questionnaire number 29, had received a rating of excellent, and it was included for committee evaluation. With the exception of questionnaire number 29, which had been awarded a percentage score of ninety all questionnaires sent to the committee members for ratings had been assigned percentage scores falling within a span of only fifteen points.

Table LIII portrays the adjectival ratings assigned by committee members and, for comparative purposes, lists the ratings assigned in the study. In the case of the questionnaire with an excellent rating, number 29, there was absolute agreement between recommended and assigned ratings. Similarly at the other extreme, unsatisfactory was both recommended and assigned in the case of questionnaire number 12. It was with questionnaire number 54 that basically different evaluations were represented in the

TABLE LIII  
ADJECTIVAL RATINGS ASSIGNED AND RECOMMENDED  
FOR SELECTED QUESTIONNAIRES

Questionnaire Number	Assigned Score	Assigned Adjectival Rating	Ratings Recommended by Committee Members <sup>a</sup>				
			#1	#2	#3	#4	#5
9 . . . . .	72 . . . . .	Good . . . . .	G	S	V	S	U
12 . . . . .	57 . . . . .	Unsatisfactory . . . . .	U	U	U	U	U
24 . . . . .	68 . . . . .	Satisfactory . . . . .	G	G	S	S	G
29 . . . . .	90 . . . . .	Excellent . . . . .	E	E	E	E	E
34 . . . . .	70 . . . . .	Good . . . . .	VG	VG	G	VG	VG
54 . . . . .	60 . . . . .	Satisfactory . . . . .	U	U	U	U	U
59 . . . . .	72 . . . . .	Good . . . . .	S	S	U	U	G

<sup>a</sup>Legend: E = Excellent, VG = Very Good, G = Good, S = Satisfactory, U = Unsatisfactory.

adjectival ratings rendered by the committee members and the ratings assigned in the study. All committee members recommended an unsatisfactory rating, whereas the rating assigned to question-naire number 54 in the study was satisfactory. The rating satisfactory was based on a raw score of 609 points of a possible 1,000, or 60.4 percent. This was at the lower limit of the percentage range for a satisfactory rating, one percentage point above the upper limit of unsatisfactory. It is quite understandable that the committee members, not having available the formally constructed scoring system used in the study, would conclude that the library did not attain the standard of satisfactory. Subsection I-A, books on required reading lists, was not applicable, inasmuch as the instructors at the Air Force base concerned had not listed any required readings. Of the three book titles on recommended reading lists, Subsection I-B, the library had none. As a library responsible for supporting only undergraduate programs, however, it had a minimum of one hundred book titles in each major curriculum-related subject category (Subsection I-C), which was sufficient to place it in the upper part of the point scale. Moreover, its score for this subsection, forty points, was multiplied by 1.66, in accordance with the formula, to compensate for the fact that Subsection I-A, books on required reading lists, was not applicable.

Similarly in the case of periodicals and newspapers, Subsection II-A, items on required reading lists, was not applicable. The library had, however, six of the twelve periodicals on

recommended reading lists (Subsection II-B). The forty-five points received for the latter subsection, when multiplied by 2.66 as prescribed by the formula, raised the score to one hundred twenty points in Subsection II-B.

In Subsection V-A, general encyclopedias, the score of fifty points was doubled, in accordance with the formula, because Subsection V-B, specialized encyclopedias related to graduate courses, did not apply. The particularly outstanding feature of the library, however, was its scheduling of hours of professional reference service. It provided such service four evenings each week and on alternate weekends, a standard which earned for it the maximum possible points, one hundred, in Section VI, hours of professional reference service available each week. The library included in its collection the back numbers of Readers' Guide to Periodical Literature, covering a period of six years. Furthermore, its patrons had ready access to the library of the college which offered courses on the base. It was the combination of these several factors which enabled the library to achieve a rating of satisfactory, even though the rating was at the lowest of limit of the percentage range for this adjectival rating.

In the case of questionnaire number 24, committee members number 1 and number 5 recommended a rating of good, committee members 3 and 4 recommended a rating of satisfactory, and committee member number 2 considered the library unsatisfactory. The rating assigned to questionnaire number 24 in the study was

satisfactory, based on a percentage score of 68.3 which was in the upper level of the satisfactory category. Among the likely areas of disagreement was the evaluation of the library in terms of its book collection. The library had one hundred percent of the books on the required reading list (Subsection I-A) and one hundred percent of the books on the recommended reading list (Subsection I-B); yet it held a minimum of one hundred titles in each major curriculum-related subject category whereas one hundred fifty titles would have been necessary for a maximum score in Subsection I-C. Moreover, in Subsection I-D, the library collection included only twenty-seven current book titles in one of the five major curriculum-related subject categories and only forty current titles in another. This resulted in an award of only five of the forty-five possible points in Subsection I-D. With a formal point scale as a reference, the results reported in the questionnaire pose no particular problem of evaluation without a scoring formula. Nuances in assessment of value can, and in this instance probably did, affect the overall evaluation of the library.

Questionnaire number 34 was considered by committee members 1, 2, 4 and 5 to be very good and by committee member number 3 to be good. The rating assigned in the study was good based on a percentage score of 70.0. As in the case of questionnaire number 24, the book collection was the likely area of difference between the assessment made by four of the committee members and that made in the study. In Subsection I-A, books on required

reading lists, the library had in its collection one hundred percent of the listed items. In Subsection I-B also, the library received the maximum number of points possible, based on its having ninety-four percent of the books on recommended reading lists. In one of its five major curriculum-related subject categories, however, the library collection contained only twelve books, and in another only sixty-six books. No points were received in Subsection I-C, therefore. In Subsection I-D, current book titles in each major curriculum-related subject category, the library questionnaire reflected only five current book titles in one of the listed subject categories and twenty-nine current book titles in another. No points were awarded in this subsection. In Subsection III-A, basic indexes, the library reported having Readers' Guide to Periodical Literature but not the Air University Library Index to Military Periodicals. Moreover, the collection contained none of the three supplementary indexes listed in Subsection III-B. On the other hand, the library was awarded the maximum possible score for its collection of unabridged dictionaries, Subsection IV-A and Subsection IV-B, and for its collection of basic encyclopedias, Subsection V-A. In terms of professional reference service, only the minimum standard was met. The library received sixty of the one hundred points possible in Section VI, hours of professional reference service available each week, based on the fact that such service was offered for forty hours each week but not at any time after normal duty hours. In summary, many of the reported strengths of the library were offset

by deficiencies which adversely affected its total point score and consequently its assigned adjectival rating.

Difference of opinion in evaluation characterized questionnaires number 9 and number 59. The former received a rating of good in the study based on a percentage score of 72.0. Only one committee member concurred in the rating of good for questionnaire number 9, however, two committee members recommended a rating of satisfactory and two recommended an unsatisfactory rating. The library represented by questionnaire number 9 supported only undergraduate programs. A further limitation in its support requirements was the fact that instructors of courses taught on the base listed neither required nor recommended readings of either books or periodicals. These factors reduced the range of focus as far as committee members and their evaluations were concerned. The library had a minimum of 225 book titles per major curriculum-related subject category giving it sixty points, a perfect score in Subsection I-C. This score was multiplied by 2.86 in accordance with the formula to compensate for the fact that there were neither required nor recommended reading lists of books. The favorable score in Subsection I-C, however, was somewhat counterbalanced by a moderate score in Subsection I-D, current book titles in curriculum-related subject categories. In that subsection only fifty-seven points (20 times 2.86) of a possible one hundred twenty-nine (45 times 2.86) points were received since the collection contained only fifty-five current book titles

in one of the listed subject categories. Similarly, a perfect score in Subsection III-A basic indexes, was offset by a zero score in Subsection III-B supplementary indexes. A maximum score was received by the library for its dictionary collection, Subsections IV-A and IV-B however, the relative point value of dictionaries was the lowest allocated to any library resource and service element in the evaluation formula. A maximum score was also awarded to the library for its basic encyclopedia collection. Subsection V-A. In terms of professional reference service available each week. Section VI, such service was available for forty hours, including three hours after normal duty hours. This was but slightly better than average. The library reflected peaks of excellence in some areas but levels of comparatively moderate achievement in others. In certain resources and services, the collection was not susceptible of evaluation, in view of the lack of stated requirements by the instructors of courses offered. Differences of opinion in the assignment of adjectival ratings are, therefore, not surprising.

As in the case of questionnaire number 9, committee recommendations pertaining to questionnaire number 59 were disparate. Two committee members proposed a rating of satisfactory, two recommended a rating of unsatisfactory, one recommended a rating of good. A good rating was assigned to questionnaire 59 in the study, based on a percentage score of 72.0. The library was one which supported undergraduate and graduate programs. The latter requirement brought into focus the



specialized bibliographic reference tools related to graduate courses. The library collection included one hundred percent of the books on the required reading lists of instructors (Subsection I-A) but only thirty-three percent of books on recommended reading lists (Subsection I-B). It received a maximum score for total book titles available in each major curriculum-related subject category (Subsection I-C) but its weakness in current book titles in one of the undergraduate subject categories and its relatively moderate level of holdings in two graduate subject categories (Subsection I-D) detracted from its favorable standing in the former subsection. The library was not evaluated in regard to periodicals and newspapers on required reading lists (Subsection II-A) since this subsection was not applicable. The collection included one hundred percent of the periodicals and newspapers listed as recommended reading (Subsection II-B), and the score of seventy-five points in Subsection II-B was multiplied by 2.66 as prescribed in the evaluation formula. The library's possession of both basic indexes was nullified by its possession of none of the listed supplementary indexes and neither of the two specialized indexes or abstracts which pertained to graduate courses offered. In Section IV the library received a maximum score for current and supplementary unabridged dictionaries and for two specialized dictionaries appropriate to graduate courses. Section IV, however had a total value of fifty points, which was but five percent of the total of one thousand points encompassing all sections and subsections.

of the evaluation formula. In Section V-A general encyclopedias the library was awarded fifty points, the maximum for this subsection. This score was negated, however, because the library had no specialized encyclopedias related to graduate courses. In Section VI, the library was above the basic standard in that it offered forty or more hours of professional reference service each week including six hours after normal duty hours. The library represented by questionnaire number 59 was, in summary, quite similar in pattern to the library represented by questionnaire number 9. Its several strong features were partially neutralized by a number of moderate or weak levels of standards or performance. This circumstance could readily account for variance of opinion on the part of those asked to evaluate the merits of the library.

The results of the three phases of the committee action were, as a whole, gratifying. Despite some variations in the recommended percentage weights for the seven resource and service elements, differences in proposed levels for the book collection and a disparity in percentage ranges recommended for the adjectival ratings of satisfactory and unsatisfactory, in the actual evaluations of selected questionnaires there was no evidence of irreconcilable disagreement. There was unanimity in the rating of two of the seven questionnaires by the five committee members and in the study itself. In only one instance, questionnaire number 54, was there a unanimous recommendation by the committee members which contradicted the rating assigned in the study. In this instance

a difference of a single point in the result produced by adherence to a carefully structured scoring formula would have effected unanimity in evaluation of the library. The adjectival ratings of the other four questionnaires (9, 24, 34 and 59) reflected inconsistency of opinion as to the appropriate level of acceptable performance or standard achieved by the library, either between the recommendation of the majority of the committee members and the assigned rating (very good as opposed to good in the case of questionnaire number 34), or among the recommendations of the committee members themselves (in regard to questionnaires 9, 24 and 59). This measure of inconsistency is attributable to the fact that the committee members were applying their individual subjective standards, not a commonly adopted procedure or established formula for evaluation of the libraries.

Verification visits In order to verify the accuracy of library questionnaire entries, visits were made to ten base libraries representing seven of the nine major air commands. These included the Air University Library, Maxwell Air Force Base, Alabama (Air University); Andrews Air Force Base, Maryland (Headquarters Command); Ellsworth Air Force Base, South Dakota; and Vandenberg Air Force Base, California (Strategic Air Command); Hill Air Force Base, Utah; and Robins Air Force Base, Georgia (Air Force Logistics Command); Langley Air Force Base, Virginia; and Shaw Air Force Base, South Carolina (Tactical Air Command); Lowry Air Force Base, Colorado (Air Training Command); and Richards-Gebaur

Air Force Base, Missouri (Aerospace Defense Command).

At some of the bases, certain of the items for verification were not applicable. For example, at two of the bases there had not been an instructor's required reading list of books, and at three of the bases no recommended reading list of books had been offered by an instructor. Six of the bases did not have required reading lists of periodicals or newspapers, and three had no recommended reading lists of periodicals or newspapers to be checked. In all instances in which required or recommended reading lists of books or of newspapers or periodicals were to be verified, the entries of the librarians on the questionnaire were found to be accurate. Each book title was checked in the public catalog, and, if multiple copies had been indicated on the questionnaire, the shelflist also was checked. At one of the libraries, where a list of several hundred book titles was checked item by item, three books not accounted for in the public catalog were later shown to be on a list of books missing from the collection since the time of submission of the questionnaire.

All aspects of the verification of the accuracy of questionnaire entries proved satisfactory except that of measurement of the number of inches of thickness of the shelflist cards, Step 3 of the library questionnaire. At all ten base libraries, the shelflist thickness within the range of Dewey Decimal numbers for each subject category shown on subject category list IA of the respective questionnaires was checked. A consistent finding was that the

measurement of thickness at the time of the verification visit reflected a smaller number of inches or a smaller fraction of an inch in at least one of the listed subject categories than had been reported on the library questionnaire. In only two instances did the difference occur in all subject categories listed. The ten bases had a combined total of seventy-two subject categories, of which thirty-nine were found to be somewhat smaller in actual holdings of book titles than had been represented on the questionnaire. In six of the thirty-nine discrepancies the difference was more than an inch of shelflist thickness or in excess of an estimated one hundred book titles. The discrepancies, however, were not large enough to affect the point score for the curriculum-related subject categories. A possible explanation of the discrepancies is that the shelflist cards were not pressed tightly together at the time of the original measurement whereas at the time of the verification visit the shelflist cards were pressed together before each measurement of thickness.

### III. EVALUATION BY COLLEGE AND UNIVERSITY REPRESENTATIVES

As indicated in Table LIV, college and university representatives of forty of the seventy-one Air Force bases replied to a questionnaire designed to elicit their opinion of the base library support of their academic programs. At thirty of the bases the college and university instructors expressed overall satisfaction

with library support and at eight bases they expressed overall dissatisfaction. At two bases the representatives of the civilian institutions indicated that instructor opinion was unknown. At twenty-seven bases student opinion of base library support of the college level education program was reported to reflect overall satisfaction; at four bases overall dissatisfaction was expressed by students; at nine bases student opinion was reported as being unknown. Representatives of the institutions sponsoring program at thirty-one bases did not reply to the questionnaire. The very brief questionnaire used for this aspect of the survey was not sufficiently detailed to be used as a validation of the findings of the library questionnaire. Moreover, there were not sufficient responses to provide the basis for thorough analysis. Of the thirty base libraries considered satisfactory by instructors, eight also were given a satisfactory or higher rating in the study. Of the twenty-seven base libraries which were generally satisfactory according to student opinion, seven also received an adjectival rating of satisfactory or higher in the study. Of the eight base libraries considered generally unsatisfactory by instructors, seven received an adjectival rating of unsatisfactory in the study. All four base libraries characterized as generally unsatisfactory by students were the recipients of unsatisfactory ratings in the study.

#### IV. ORGANIZATIONAL ASPECTS

Air Force Library Service is administered at Headquarters

United States Air Force level through the Libraries Section, Recreation Support and Services Branch, Special Services Division, Directorate of Military Personnel, with offices at the Military Personnel Center, Randolph Air Force Base, Texas. The education program, on the other hand, is administered through the Education Services Branch, Professional Education Division, Directorate for Personnel Training and Education, with offices in or near the Pentagon, Washington, D. C.<sup>14</sup> The two functions, library services and education services, are thus operating at different hierarchical levels and in different organizational frameworks.

#### V. SUMMARY

Of seventy-one base libraries surveyed to ascertain their capacity to support off-duty education programs offered on the military installations where these libraries were situated, forty-one were involved in the support of undergraduate programs only, and thirty were concerned with the support of graduate programs or a combination of graduate and undergraduate programs. At the undergraduate level, heaviest enrollment was observed in courses in English composition, psychology, United States history and accounting. Graduate courses with highest enrollment were management, education and economics.

An irregular pattern of instructors' required and recommended readings was observed in an education program survey

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<sup>14</sup>Supra, pp. 52-53.

conducted through base education services offices. Twelve of the seventy-one bases reported no outside reading requirements or recommended readings in any course. A bibliographic data bank of information on book titles was of use in statistical summation but of less than anticipated usefulness in precluding duplication of search efforts, inasmuch as approximately eighty percent of the book titles appeared on no more than one base reading list. The bibliographic data bank was of considerable practical use, however, in preventing duplication in the search of periodical and newspaper titles, since they occurred with greater frequency on the listings.

Base education services officers at thirty-two of the Air Force installations surveyed cited some form of either direct or indirect assistance to the base library by one or more of the civilian institutions affiliated with the off-duty education program. The most common forms of assistance consisted of placing materials from the college or university library on the base library reserve shelf, and making the resources of the civilian campus library available to Air Force students.

Among the seventy-one libraries in the study, one received an adjectival rating of excellent, six were rated as good, fourteen were considered satisfactory and fifty were in the unsatisfactory category. Tabulations of the various subsections of the questionnaire were prepared. These are included in Appendix D. Deficiency of the book collection was a major factor in the unsatisfactory ratings assigned base libraries in this study.



Results of visits made to ten base libraries for the purpose of verifying the accuracy of questionnaire entries were generally satisfactory

Representatives of the civilian colleges and universities affiliated with the seventy-one bases which participated in the study were provided an opportunity to offer an opinion on the overall effectiveness of library support of their programs. Replies were received from these representatives located at forty of the bases. At thirty of the forty bases instructors expressed overall satisfaction with base library support; at eight they expressed overall dissatisfaction. Student opinion was reported to reflect overall satisfaction with base library support at twenty-seven bases and overall dissatisfaction at four bases.

At Headquarters United States Air Force level, library services and education services are administered through different organizational frameworks.

## CHAPTER VI

### SUMMARY CONCLUSIONS AND RECOMMENDATIONS

A general summary of salient aspects of the study, conclusions based on the findings, and recommendations for action and additional research will comprise this chapter.

#### I. SUMMARY

The problem. The problem of this study was to determine the adequacy of base library service and collections to support the undergraduate and graduate study programs undertaken on United States Air Force installations by officers and airmen, through civilian institutions during off-duty hours. Basic to the problem was the need to develop a method of library evaluation that would be applicable to the individual base libraries involved in the support of specific programs of college-level, off-duty education yet one which at the same time would be sufficiently broad in applicability to serve as a rating system for any Air Force base library engaged in supporting such programs.

Delimitations. The study encompassed base libraries at United States Air Force bases which were within the continental

United States. It was limited to installations whose libraries were under the jurisdiction of the following major air commands or separate operating agencies: Aerospace Defense Command, Air Force Logistics Command, Air Training Command, Air University, Headquarters Command, Military Airlift Command, Strategic Air Command, Tactical Air Command and United States Air Force Security Service. Base libraries which supported educational programs offered during off-duty hours on military installations, rather than on the campus of the sponsoring civilian college or university, were included. Only educational programs leading to undergraduate or graduate degrees, and not junior college or other such programs of a duration of two years or less, were considered. The study, which focused on the first academic term of the autumn of 1967, did not include the libraries affiliated with the Minuteman Education Program.

Procedure. A two-phase investigative procedure was used, consisting of (1) questionnaires sent to Air Force base education services officers in order to obtain information on courses offerings, enrollment and reading requirements at each of the seventy-one participating bases, and (2) questionnaires sent to base librarians to ascertain the quality and quantity of base library resources and services needed to support the off-duty education programs at the bases included in the study. With the assistance of ten experienced

professional librarians, an evaluative formula was developed which established point scales to be used in the rating of the following resource and service elements of the base libraries: (1) the book collection, (2) the periodical and newspaper collection, (3) indexes and abstracts, (4) dictionaries, (5) encyclopedias, (6) professional reference service and (7) supplementary resources, including duplicate copies of required reading materials, back numbers of periodicals, indexes and abstracts, microtext materials, and resources of other libraries. Raw scores assigned to library questionnaires were converted to percentage scores. The following percentage score ranges were designated to encompass corresponding adjectival ratings:

<u>Percentage Range</u>	<u>Adjectival Rating</u>
90-100 . . . . .	Excellent
80-89 . . . . .	Very Good
70-79 . . . . .	Good
60-69 . . . . .	Satisfactory
0-59 . . . . .	Unsatisfactory

Findings. In the autumn academic term of 1967, there were 16 678 enrollments in 868 undergraduate courses and 1,999 enrollments in 103 graduate courses offered by civilian colleges and universities at the 71 bases studied. An irregular pattern of instructor reading requirements prevailed. Instructors at twelve bases reported no reading requirements or recommended readings of books,

periodicals or newspapers. At nineteen bases there were no books on required reading lists, and at twenty-six bases five or fewer books were on required reading lists. At twenty-one bases there were no books assigned by instructors to recommended reading lists, and at thirteen bases five or fewer books were on recommended reading lists. At fifty bases there were no periodicals or newspapers on required reading lists, and at thirteen bases five or fewer periodicals or newspapers were on required reading lists. At twenty-eight bases there were no periodicals or newspapers reported on recommended reading lists of instructors, and at seventeen bases five or fewer periodicals or newspapers appeared on recommended reading lists.

Of the seventy-one base libraries, forty-one were concerned with the support of undergraduate programs only, and thirty were involved in supporting only graduate programs or combinations of graduate and undergraduate programs. Among the libraries which supported only undergraduate programs, five received adjectival ratings of good, nine were in the satisfactory category, and twenty-seven were considered unsatisfactory. Among the libraries which were concerned with graduate programs or combinations of graduate and undergraduate programs, one was awarded an excellent rating, one was assigned a good rating, five were rated as satisfactory, and twenty-three were considered to be in the category of unsatisfactory.

The book collection, to which was assigned a weight of thirty percent of the point score in the evaluation formula, was the area of dominant weakness in the collections of most libraries which received ratings of unsatisfactory. Lack of adequate communication between representatives of civilian institutions and base libraries was evident, particularly with respect to the development of curriculum-related book collections in the base libraries. Air Force library regulations and the contractual arrangements between Air Force installations and civilian educational institutions did not clearly define or precisely specify the responsibility for library support of the college-level, off-duty education programs considered in this study. Sixty of the Air Force base libraries were authorized only one professional librarian. Thirty-six libraries offered no professional reference assistance after normal duty hours. To support a variety of library services and reading requirements, of which the off-duty education program was only a part of the total, the average base library was allocated approximately \$9,000 annually.

Evaluation by college and university representatives.

Civilian educational institution representatives at forty bases responded to a questionnaire designed to elicit their appraisal of base library support of their academic programs. In thirty instances, instructor opinion of the base library support was favorable, in eight

instances it was unfavorable; in two cases it was reported to be unknown. At twenty-seven bases student opinion of base library support of the college-level education program was reported to reflect overall satisfaction; at four bases overall dissatisfaction was expressed by students; at nine bases, student opinion was reported to be unknown.

## II. CONCLUSIONS

Conclusions drawn from this study include the following:

- (1) That, with a few notable exceptions, Air Force base libraries were generally inadequate in regard to their capacity to support off-duty education programs of undergraduate and graduate level.
- (2) That the organizational separation of library service and education at Headquarters United States Air Force level has contributed to the inadequate coordination of these two functions, although at the local level the lack of adequate communication between Air Force base librarians and representatives of off-duty educational programs is more clearly evident and more immediate in its effect on the quality and extent of library support of such programs.
- (3) That additional initiative and resourcefulness on the part of base librarians are needed to build and broaden book collections, to provide the indexes needed to improve the usefulness of periodical literature, and to raise the level of professional reference assistance.
- (4) That existing authorizations of library personnel and the

present level of annual expenditures in Air Force base libraries do not provide the basis for a well-developed program of library service to the officers and airmen enrolled in college-level education courses on military installations.

(5) That contractual arrangements between Air Force installations and civilian educational institutions which were in effect at the time of this study were a contributive factor to the inadequacy of library resources and service.

(6) That lack of specific guidance in regard to college-level off-duty education programs, as reflected in the current (1965) edition of Air Force Regulation 212-1, "Air Force Library Service," restricted the effectiveness of library support of such programs.

### III. RECOMMENDATIONS

As a result of the completed study, the following recommendations are made:

(1) That Headquarters United States Air Force reevaluate the organizational framework in which Air Force Library Service performs its mission, and that consideration be given to juxtaposing it hierarchically to education services rather than aligning it with recreation services.

(2) That the Chief of Education Services, Headquarters United States Air Force, take action to evaluate and stimulate the coordination



between the present representatives of civilian educational institutions conducting undergraduate and graduate programs on Air Force installations and the representatives of Air Force bases who are directly involved in these programs, namely, the base education services officers and base librarians. Timely and careful preparation of instructors' reading lists, for example, would be of significant benefit to Air Force students.

(3) That a careful review of manning authorizations be made by Headquarters United States Air Force, in coordination with the Director of Air Force Library Service, and that libraries located at bases more than fifty miles from available college-level library facilities be provided with at least two professional librarians when annual enrollments exceed one hundred in undergraduate or graduate programs conducted by civilian institutions.

(4) That a budget supplement, of an amount to be recommended by the Director of Air Force Library Service and the Chief of Education Services, Headquarters United States Air Force, be made available to base libraries which have been assigned full responsibility for the support of college-level, off-duty education programs. The budget supplement would help in the acquisition of required books and periodicals, and it might well be used to defray part of the cost of binding the cumulations of periodicals related

to curricular offerings, in addition to being used for the purchase of microtext materials.

(5) That contractual arrangements between Air Force installations and civilian educational institutions be consummated only after careful consideration of, and adequate provision for, the requirements for library service. The Air Force should assure itself that the best interests of its officers and airmen are being served, commensurate with facilities and resources available. Close cooperation between the base education services officer and the base librarian on the one hand, and between the latter two Air Force officials and representatives, including the librarian, of the civilian institution on the other hand, during the early planning stages of an academic program, would establish channels of communication needed for a successful working relationship.

(6) That the Director of Air Force Library Service arrange for the issuance of specific guidelines for base libraries concerned with supporting college-level programs for Air Force officers and airmen. Such minimum steps as provision for an unabridged edition of Readers' Guide to Periodical Literature, the Air University Library Index to Military Periodicals and specialized reference tools related to the graduate course offering would be fundamental.

(7) That the Secretary of the Air Force, in coordination with

the Director of Air Force Library Service and the Chief of Education Services, Headquarters United States Air Force, effect the appointment of an Air Force library survey board, consisting of one member of each of the following organizations: American Library Association, Special Libraries Association, the Air Force Institute of Technology Library, the Air University Library, the United States Air Force Academy Library and each regional accreditation association concerned. Using the evaluation system developed in this study, the survey board would conduct periodic visits to Air Force base libraries which have responsibility for supporting off-duty education programs. Such a board would be in a position to safeguard the best interests of Air Force students, and ultimately the interests of the academic communities of which they are a part; to develop and implement meaningful standards of library service; to coordinate the planning of expanded programs of education, and to identify and promote excellence in areas where it has the capacity to flourish.

(8) That the Director of Air Force Library Service arrange for a survey of Air Force base libraries supporting off-duty education programs of undergraduate and graduate level at installations outside the continental limits of the United States. The procedure used in the present study would be appropriate for the evaluation of the overseas libraries for several reasons. First, it has already been tested and

refined by means of an evaluation of seventy-one Air Force base libraries. Second, it is relatively simple to administer. Third, it is designed to provide the Director of Air Force Library Service, command librarians and base librarians a means of assessing objectively not only the overall capacity of base libraries to support college-level academic programs but also the strengths and weaknesses of the major resource elements which underlie such capacity. Fourth, because the investigative procedure requires the participation of representatives of the civilian educational institutions concerned, it indirectly abets cooperative effort between librarians and educators.

The foregoing recommendations have been presented with full awareness of their scope and probable difficulty. Through favorable consideration and adoption of these proposals, however, the Air Force can provide its officers and airmen the range and professional caliber of library service needed for meaningful research and academic development.

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APPENDIX A

GLOSSARY



## GLOSSARY

airman. The term airman is used by the United States Air Force to designate one of its enlisted members, including noncommissioned officers.

appropriated funds. This phrase refers to moneys approved by act of Congress for use by governmental departments and agencies.

base library. A base library is a general library operated under the authority and provisions of Air Force Regulation 212-1, "Air Force Library Service," and located on a military installation administered by the United States Air Force. It is identified by a United States Air Force library account number. The definition does not apply to the libraries affiliated with the Minuteman Education Program, which are established by the Air Force Institute of Technology and are funded through Strategic Air Command. In fiscal year 1968, for example, the Air Force Institute of Technology Library received from Strategic Air Command the authority to obligate approximately \$17,000 for the purchase of books and periodicals for Minuteman Education Program libraries, of which there are six.<sup>1</sup> A typical one of these libraries,

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<sup>1</sup> This information on Minuteman Education Program libraries was obtained through a telephoned interview with William Mills, Chief of Technical Services of the Air Force Institute of Technology Library, Wright-Patterson Air Force Base, Ohio, on August 19, 1968.

the Air Force Institute of Technology detachment library supporting the Minuteman Education Program at Ellsworth Air Force Base, South Dakota, had approximately 2,358 volumes, including duplicate copies, at the time of the survey. In addition to its book budget of approximately \$2,000 and a periodical subscription budget of a like amount, the librarian of the Ellsworth Minuteman library had available an emergency fund of \$4,000 monitored by the contracting institution, the University of South Dakota, which could be used for ordering books directly from commercial publishers or for ordering materials from the Government Printing Office.<sup>2</sup> Only one of the six Minuteman Education Program libraries was staffed by a librarian with an accredited library science degree at the time of this study. The Malmstrom Air Force Base, Montana Minuteman Education Program, which did have a professional librarian, was being conducted by a group of instructors from the Air Force Institute of Technology, Wright-Patterson Air Force Base, Ohio, but was scheduled to begin operating under contractual agreement with the University of Montana in December 1968. The other five Minuteman

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<sup>2</sup>Information on the Air Force Institute of Technology detachment library supporting the Minuteman Education Program at Ellsworth Air Force Base was obtained from Mrs. Elizabeth Goette, the librarian during the writer's visit to that library on June 13, 1968. Mrs. Goette was the only employee of the library. She was paid \$625 per month by the University of South Dakota and did not have Civil Service status. At the time of the writer's visit, Mrs. Goette did not have a degree from an accredited library school, although she had taken some library science courses.

programs were already conducted by civilian universities.<sup>3</sup>

book kit. Book kits are collections of books purchased from a commercial vendor through the use of Department of the Air Force welfare-morale appropriated funds. Selected by professional librarians of the Directorate of Air Force Library Service, the books are procured through commercial contract and allocated by Headquarters United States Air Force to the major air commands and separate operating agencies. In fiscal year 1968 budget restrictions caused the book kits to be reduced in size. Even so, monthly kits of clothbound books, consisting of twenty titles each, were distributed to the base libraries. Smaller kits of ten titles each, chosen from the twenty-title kits, were sent to field libraries and patients' libraries. In addition to the clothbound book kit, a monthly paperbound book kit of forty titles was sent to base libraries, and a paperbound book kit of twenty titles, selected from the forty-title kit, was sent to field libraries each month. Also, a book kit of fifty paperback titles of above-average quality, with hard covers added, was sent to the base libraries quarterly. Large base libraries with field libraries under their jurisdiction were eligible for two or more book kits. The book kits consist of fiction or popular nonfiction. Magazine sets of eighteen and eight titles, respectively, were also

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<sup>3</sup>This information is based on a telephoned interview with Dr. Tibor Vincze, Director of Libraries, Air Force Institute of Technology, on August 19, 1968.

distributed. Air Force expenditures for book kits and magazine sets amounted to approximately \$1,300,000 in fiscal year 1968. Base librarians are not expected to include book kit items or magazine set subscriptions in their budget plans or financial reports.<sup>4</sup>

fiscal year. Within the Department of Defense and other branches of the United States Government, a fiscal year is an accounting period that begins on July 1 of each year and ends on June 30 of the following year. Fiscal year 1968, for example, began July 1, 1967 and ended June 30, 1968.

library service center. As defined by Air Force Regulation 212-1, a library service center is a distribution and redistribution center the primary function of which is to supply library materials "to libraries, including field libraries, rather than to lend materials to individuals."<sup>5</sup> It may also be responsible for technical book processing, centralized reference and specialized bibliographic service. The Aerospace Defense Command, which has library service centers operated by First Air Force, Fourth Air Force and Tenth Air Force, considers such centers to be important and effective means of serving officers and

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<sup>4</sup>Details on book kits and magazine sets are based on a telephone interview with John L. Cook, Director of United States Air Force Library Service, on August 21, 1968.

<sup>5</sup>United States Department of the Air Force, Air Force Regulation 212-1, "Air Force Library Service," March 22, 1965, paragraph 1.

airmen at remotely located radar sites and fighter interceptor squadron dispersal sites. The Fourth Air Force Library Service Center which is typical of these organizations, in 1967 served Condon Air Force Station and twenty-three other field libraries. Library service centers of Aerospace Defense Command (then called Air Defense Command) in that year were authorized one librarian (GS-10), one library technician (GS-5) and one administrative clerk (Airman Second Class or a civilian clerk-typist, GS-2 or GS-3). Field libraries served by these centers have no full-time civilian staff authorized but operate either on an honor system through the squadron special services noncommissioned officer or through civilian or military personnel working on a part-time basis whose salaries are provided through non-appropriated welfare funds of the unit served.<sup>6</sup>

line officer. A line officer is "an officer engaged in operational duties especially combat duties."<sup>7</sup> Actually the term is used to differentiate between an operational duty officer and a member of any special grouping of officers such as the Medical Corps, having specific professional

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<sup>6</sup> Information about the Fourth Air Force Library Service Center is based on an October 10, 1967 conversation with Lucia Gordon, Command Librarian of Aerospace Defense Command (then Air Defense Command), who provided the writer with a listing of the radar sites and dispersal sites served, as well as a roster of the staff members of the Center.

<sup>7</sup> United States Department of the Air Force, The United States Air Force Dictionary. Edited by Woodford A. Heflin (Maxwell Air Force Base, Alabama: Air University Press, 1956), p. 301.

or educational certification as a prerequisite to commissioned officer status. A review of the 1968 "Air Force Register" indicates that approximately ninety-three percent of the Air Force officers on active duty are in the "line of the Air Force" category.<sup>8</sup>

major air command. A major air command is a large, functional subdivision of the Air Force, administratively responsible to Headquarters United States Air Force.<sup>9</sup> Examples are Tactical Air Command and Strategic Air Command, which in turn exercise authority over numbered air forces; however, not all major air commands have numbered air forces. Ninth Air Force, of Tactical Air Command, is an example of a numbered air force.

nonappropriated funds. These funds are moneys not made available through an act of Congress, but authorized by the Secretary of the Air Force for "the purpose of promoting the welfare, comfort and pleasure of its military and civilian personnel and their dependents."<sup>10</sup> These funds are derived from various nonappropriated fund activities, such as

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<sup>8</sup>United States Department of the Air Force. Air Force Pamphlet 36-1, "Air Force Register," January 1, 1968. Volume 1: "Active Lists," pp. 1363-1682.

<sup>9</sup>United States Department of the Air Force. The United States Air Force Dictionary. Edited by Woodford A. Hefling (Maxwell Air Force Base, Alabama: Air University Press, 1956), p. 513.

<sup>10</sup>United States Department of the Air Force. Air Force Manual 170-3, "Glossary of Terms Used in Air Force Comptroller Activities," August 10, 1959, p. 46.

base theaters and bowling alleys. Nonappropriated funds are administered under the provisions of Air Force Regulation 176-1.<sup>11</sup>

O and M funds. This term refers to operations and maintenance funds sometimes called "P-458" funds, which are locally controlled appropriated funds allocated to Air Force base organizations and activities. Their expenditure for library materials is accomplished through base procurement offices. The most recent report available shows that \$4,802,689 of "O and M" money was spent in the first half of fiscal year 1968.<sup>12</sup> This total also included the expenditures for salaries. The amount of all appropriated and nonappropriated locally administered funds spent by base libraries for books, periodicals, and other library materials during this period was \$1,143,823.<sup>13</sup>

professional librarian. For purposes of this study, a professional librarian is a librarian who holds a degree in library science from a library school accredited by the American Library Association, or who

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<sup>11</sup>United States Department of the Air Force, Air Force Regulation 176-1, "Nonappropriated Funds: General Policies and Operating Principles," February 7, 1964.

<sup>12</sup>Letter, Colonel G. W. McLughan, Deputy Director of Personnel Services, Headquarters United States Air Force (USAFMPC (AFPMsBR)), to major air commands and separate operating agencies, April 9, 1968, "USAF Consolidated Semiannual Library Report - July - December 1967," and Attachment 1 thereto.

<sup>13</sup>Statement by John L. Cook, Director of United States Air Force Library Service, in a telephoned interview on October 14, 1968.

has successfully completed at least twenty-four semester hours or thirty-six quarter hours toward such a degree.

professional reference service. This phrase applies to reference service that is made available by a professional librarian who is present in the library at the time such reference service is offered.

separate operating agency. A separate operating agency is a functional subdivision of the Air Force, administratively responsible to Headquarters United States Air Force. Separate operating agencies are smaller and more specialized than their counterparts, major air commands. Their missions, though specialized, affect the Air Force as a whole. Typical of these are the Air Force Academy and the United States Air Force Security Service.

technical library publication funds. Commonly referred to as "technical book" funds or "P-438" funds, moneys for technical library publications are administered under the provisions of Air Force Regulation 212-3.<sup>14</sup> With the exceptions of the United States Air Force Academy Library, the libraries of the Air University and, in certain instances, libraries of the Office of Aerospace Research and the Air Force Systems Command, the base libraries of all major air commands and separate operating agencies

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<sup>14</sup> United States Department of the Air Force, Air Force Regulation 212-3, "Requisitioning Technical Library Publications," January 18, 1955.



use these appropriated funds which are controlled by Air Force Logistics Command, for the purchase of technical books and pamphlets, technical serial publications, books and subscriptions for legal activities, publications of the Government Printing Office and other mission-support library materials.<sup>15</sup> A total of \$1,407,620 was spent by Air Force libraries for technical library publications in fiscal year 1968. Although for a number of years base librarians have experienced difficulty in obtaining approval for the use of technical book funds for the purchase of library materials needed for the support of college-level off-duty education programs, John L. Cook, Director of United States Air Force Library Service, holds the view that if education programs are locally considered a mission-support activity, library purchases in this fund category are justifiably made. Severe funding limitations in recent years, however, have handicapped librarians' efforts to program effective support of educational activities through this means. Nonappropriated welfare funds, which formerly were used by librarians primarily for fiction and other popular works of general interest, have to a limited extent been made available recently for purchase of books and periodical subscriptions recommended for supplementary reading in off-duty education classes.<sup>16</sup>

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<sup>15</sup> Ibid. Attachment 1.

<sup>16</sup> Information about expenditures of these funds was obtained during a telephoned interview with John L. Cook, Director of United States Air Force Library Service, on August 21, 1968.

## **APPENDIX B**

### **ARCHIVES BRANCH DOCUMENTS AND FILE NUMBERS**

**Source. Archives Branch Historical Division,  
Aerospace Studies Institute, Maxwell Air Force Base, Alabama**

File Number	Document
K 239.01, July - December 1960	Headquarters Air University. Deputy Chief of Staff/Education. Evaluation Division. <u>An Inventory of Formal Education of USAF Line Officers by Career Area</u> . A Report Prepared for the Secretariat, Air Force Educational Requirements Board. Maxwell Air Force Base, Alabama. 1960. Included as a supporting document to the Air University History July 1, 1960, to December 31, 1960.
141.01, July 1949 - December 1950	Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Historical Report, July 1, 1949, to December 31, 1950. Vol. 1.
K 141.01, July - December 1950	Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Training. Personnel Procurement Division. Historical Report, July 1, 1950 to December 31, 1950.
K 141.01, July - December 1951	Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Personnel Services Division. Staff History, July 1, 1951, to December 31, 1951. Part III.
K 141.01, January - June 1952	Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Personnel Services Division. Staff History, January 1, 1952 to June 30, 1952.

File Number	Document
K 141.01, July - December 1952	Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Personnel Services Division. Staff History. July 1, 1952 to December 31, 1952.
K 141.01, January - June 1953	Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Personnel Services Division. Staff History. January 1 1953, to June 30 1953.
K 141.01, January - June 1954	Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Personnel Services Division. Semiannual History January 1 1954, to June 30, 1954.
K 141.01, July - December 1954	Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Personnel Services Division. Semiannual History July 1 1954 to December 31 1954.
K 141.01, July - December 1954	Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Personnel Procurement and Training. Professional Education Division. Semiannual History, July 1, 1954 to December 31, 1954. Vol. III.

File Number	Document
K 141.01, January - June 1955	Headquarters United States Air Force. Deputy Chief of Staff/ Personnel. Directorate of Military Personnel. Personnel Services Division. Education and Libraries Branch. Semiannual History, January 1, 1955, to June 30, 1955. Vol. II.
K 141.01, July - December 1955	Headquarters United States Air Force. Deputy Chief of Staff/ Personnel. Directorate of Military Personnel. Personnel Services Division. Education and Libraries Branch. Semiannual History July 1 1955 to December 31, 1955. Vol. II.
K 141.01, July - December 1955	Headquarters United States Air Force. Deputy Chief of Staff/ Personnel. Directorate of Personnel Procurement and Training. Professional Education Division. Semiannual History, July 1 1955 to December 31 1955. Vol. II.
K 141.01, January - June 1956	Headquarters United States Air Force. Deputy Chief of Staff/ Personnel. Directorate of Military Personnel. Personnel Services Division. Education and Libraries Branch. Semiannual History January 1, 1956 to June 30 1956. Vol. II.
K 141.01, July - December 1956	Headquarters United States Air Force. Deputy Chief of Staff/ Personnel. Directorate of Military Personnel. Personnel Services Division. Education and Libraries Branch. Semiannual History July 1 1956 to December 31 1956. Vol. II.

File Number	Document
K 141.01, July - December 1957	Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Personnel Services Division. Education and Libraries Branch. Semiannual History, July 1, 1957, to December 31, 1957. Vol. 1.
K 141.01, January - June 1958	Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Personnel Services Division. Education, Libraries and Community Services Branch. Semiannual History, January 1, 1958, to June 30, 1958. Vol. II.
K 141.01, July - December 1958	Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Personnel Services Division. Education, Libraries and Community Services Branch. Semiannual History, July 1, 1958, to December 31, 1958. Vol. II.
K 141.01, January - June 1959	Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Personnel Services Division. Education, Libraries and Community Services Branch. Semiannual History, January 1, 1959, to June 30, 1959. Vol. II.

## File Number

## Document

K 141.01, July - December 1959

Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Education Libraries and Community Services Branch. Semiannual History. July 1, 1959 to December 31, 1959. Vol. II.

K 141.01, July - December 1960

Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Procurement and Training. Professional Education Division. Semiannual History. July 1, 1960 to December 31, 1960. Vol. III.

K 141.01, July - December 1960

Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Personnel Services Division. Education Libraries and Community Services Branch. Semiannual History. July 1, 1960 to December 31, 1960. Vol. II.

K 141.01, January - June 1961

Headquarters United States Air Force. Deputy Chief of Staff/Personnel. Directorate of Military Personnel. Personnel Services Division. Education Libraries and Community Services Branch. Semiannual History. January 1, 1961 to June 30, 1961. Vol. IV.

File Number	Document
K 141.01, July - December 1961	Headquarters United States Air Force. Deputy Chief of Staff/ Personnel. Directorate of Military Personnel. Personnel Services Division. Education Libraries and Community Services Branch. Semiannual History, July 1, 1961 to December 31, 1961. Vol. IV.
K 141.01, January - June 1962	Headquarters United States Air Force. Deputy Chief of Staff/ Personnel. Directorate of Military Personnel. Personnel Services Division. Education, Libraries and Community Services Branch. Semiannual History, January 1, 1962, to June 30, 1962. Vol. IV
K 141.01, July - December 1962	Headquarters United States Air Force. Deputy Chief of Staff/ Personnel. Directorate of Military Personnel. Personnel Services Division. Education, Libraries and Community Services Branch. Semiannual History, July 1, 1962 to December 31, 1962. Vol. VI.
K 141.01, January - June 1963	Headquarters United States Air Force. Deputy Chief of Staff/ Personnel. Directorate of Military Personnel. Personnel Services Division. Special Services Branch. Semiannual History January 1, 1963 to June 30, 1963. Vol. I.



## File Number

## Document

570.01, July 1 - December 31, 1949      Headquarters United States Air  
Forces in Europe. Office of the  
Historian. A Short History of  
USAFE. July 1, 1949 to December  
31, 1949 Historical Data.  
Wiesbaden, Germany 1950

APPENDIX C

BACKGROUND TABLES

TABLE 1

COLLEGE-LEVEL OFF-DUTY EDUCATION PROGRAM ENROLLMENTS WITHIN  
THE UNITED STATES AIR FORCE, BY FISCAL YEAR<sup>a</sup>

	1950	1951	1952	1953	1954	1955	1956	1957	1958
Officers	6 446	12 049	17 693	18 081	20 935	23 666	31 723	27 707	24 214
Airmen	9 520	21 605	34 244	35 618	51 152	58 905	62 751	58 873	65 469
Total	15 966	33 654	51 937	53 699	71 887	82 571	94 474	86 587	89 683

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968
Officers	27 704	29 850	31 833	35 731	44 821	43 854	41 039	35 784	25 059	28 679
Airmen	65 025	77 371	92 946	112 874	135 702	132 413	137 347	145 784	126 918	135 319
Total	92 729	107 221	124 779	148 605	180 523	176 267	178 386	181 568	151 977	163 998

<sup>a</sup>Obtained from Robert W. Quick, Chief, Education Services, Headquarters United States Air Force.

TABLE II

ACADEMIC DEGREES EARNED BY UNITED STATES AIR FORCE PERSONNEL THROUGH  
COLLEGE-LEVEL, OFF-DUTY EDUCATION PROGRAMS, BY FISCAL YEAR<sup>a</sup>

Year	Total <sup>b</sup>	Year	Baccalaureate	Master's	Doctoral	Total
1952	755	1965	1 476	459	8	1 943
1953	822	1966	1 294	518	5	1 817
1954	806	1967	869	580	3	1 452
1955	838	1968	748	1 038	9	1 795
1956	809					
1957	850					
1958	758					
1959	872					
1960	1 060					
1961	1 042					
1962	1 043					
1963	1 433					
1964	1 832					

<sup>a</sup>Obtained from Robert W. Quick, Chief, Education Services, Headquarters, United States Air Force

<sup>b</sup>Although prior to fiscal year 1965 the compilation did not reflect the identification of academic levels of degrees awarded, the preponderance was likely to have been at the baccalaureate level

TABLE III

TUITION ASSISTANCE EXTENDED UNITED STATES AIR FORCE PERSONNEL  
FOR OFF DUTY EDUCATION PROGRAMS BY FISCAL YEAR<sup>a</sup>

Fiscal Year	Amount	Fiscal Year	Amount
1950	\$ 585 846	1960	\$2 120 945
1951	773 845	1961	2 421 500
1952	1 309 007	1962	3 127 440
1953	1 293 531	1963	4 798 544
1954	1 088 895	1964	4 840 215
1955	1 345 906	1965	4 928 830
1956	1 420 918	1966	4 770 188
1957	1 894 273	1967	4 159 167
1958	1 656 389	1968	5 212 373
1959	1 841 613		

<sup>a</sup>Totals for fiscal years 1950 through 1967 were obtained from Robert W. Quick, Chief Education Services, Headquarters United States Air Force. Fiscal year 1968 total was obtained from Master Sergeant Thomas M. Lee, Jr., Education Services Branch, Headquarters United States Air Force.

TABLE IV  
EDUCATIONAL LEVELS OF AIR FORCE LINE OFFICERS  
BY RANK, AS OF 1960<sup>a</sup>

Rank	High School	Less than 2 Years of College	2 to 4 Years of College	Baccalaureate Degree	Masters Degree	Ph. D	Total
Colonel	Total Percent	124 6	1,024 25	1,969 49	625 15	51 1	4,043 100
Lieutenant Colonel	Total Percent	670 14	2,720 29	3,418 37	1,026 11	66 1	9,223 100
Major	Total Percent	2,442 28	6,413 30	4,893 23	1,329 6	64 -	21,175 100
Captain	Total Percent	4,214 29	10,632 25	13,192 32	1,621 4	51 -	41,764 100
Lieutenant	Total Percent	2,892 17	4,128 12	20,646 60	527 2	63 -	34,189 100
Total Percent	25,594 23	10,342 9	24,917 22	44,118 40	5,128 5	235 -	110,394 100

<sup>a</sup>Obtained from Headquarters Air University, Deputy Chief of Staff/Education Evaluation Division. An Inventory of Formal Education of USAF Line Officers by Career Area. A Report Prepared for the Secretary, Air Force Educational Requirements Board, Maxwell Air Force Base, Alabama 1960 p 260

TABLE V

EDUCATIONAL INSTITUTIONS OFFERING OFF-DUTY ACADEMIC PROGRAMS FOR  
UNITED STATES AIR FORCE PERSONNEL<sup>a</sup>

Level of Academic Program	Within Continental United States			Outside Continental United States <sup>b</sup>		
	On Base	Off Base Only	Combined Total	On Base	Off Base Only	Combined Total
Junior College <sup>c</sup>	23	31	54	1	1	2
Undergraduate	31	21	52	2	6	8
Undergraduate and Graduate	33	43	76	6	2	8
Graduate	9	5	14	3	2	5
Undergraduate only on base but Graduate off base			15			0
Graduate only on base but Undergraduate off base		4	4			0
Total	96	100	215	12	11	23

<sup>a</sup> Derived from Letter Colonel W. Staylor, Director for Personnel Training and Education (AFPTRF), Headquarters, United States Air Force, to the major air commands and separate operating agencies, May 15, 1968, "Major Post Secondary Program Opportunities" and Attachment 1 thereto.

<sup>b</sup> Includes several institutions that also are included in the totals for programs within the continental United States.

<sup>c</sup> Does not include terminal occupational programs which are listed in the cited source.

TABLE VI

UNITED STATES AIR FORCE INSTALLATIONS OFFERING OFF DUTY ACADEMIC PROGRAMS WITHIN THE CONTINENTAL UNITED STATES<sup>a</sup>

Highest Level of Program	On Base	Off Base Only	Combined	Total
Junior college <sup>b</sup>	3	2		5
Undergraduate	9	3		12
Undergraduate and Graduate	49	19		68
Graduate only	1	0		1
Junior college only on base but upper division undergraduate off base			3	3
Junior college only on base but undergraduate and Graduate off base			4	4
Junior college and Graduate on base but undergraduate off base			1	1
Undergraduate only on base but Graduate off base			19	19
Graduate only on base but undergraduate off base			2	2
Total	62	24	29	115

<sup>a</sup>Derived from Letter Colonel W. Staylor, Directorate for Personnel Training and Education (AFPTRE), Headquarters United States Air Force, to the major air commands and separate operating agencies, May 15, 1968, "Major Post-Secondary Program Opportunities" and Attachment 1 thereto.

<sup>b</sup>D.O.s not include terminal occupational programs which are listed in the cited source.



TABLE VII  
UNITED STATES AIR FORCE INSTALLATIONS OFFERING OFF-DUTY ACADEMIC  
PROGRAMS OUTSIDE THE CONTINENTAL UNITED STATES<sup>a</sup>

Highest Level of Program	On Base	Off Base Only	Combined	Total
Junior college	0	0		0
Undergraduate	42	2		44
Undergraduate and Graduate	29	0		29
Graduate only	0	0		0
Undergraduate only on base but Graduate off base			3	3
Total	71	2	3	76

<sup>a</sup>Derived from Letter Colonel W. Staylor, Directorate for Personnel Training and Education (AFPTRE), Headquarters United States Air Force, to the major air commands and separate operating agencies, May 15, 1968, "Major Post-Secondary Program Opportunities" and Attachment 1 thereto.

TABLE VIII  
1958 MINIMUM BOOK COLLECTION STANDARDS  
FOR BASE LIBRARY SYSTEMS<sup>a</sup>

Adult Collection	
Base Population	Volumes
1 to 500	Minimum collection of 1 500
501 to 2 000	4 volumes per capita
2,001 to 5 000	3 volumes per capita
5 001 to 10 000	3 volumes per capita up to 25 000
10 001 and above	2 1/2 volumes per capita
Juvenile Collection	
Dependent Children	Volumes
Pre-School	3 volumes per capita
School Age	2 volumes per capita
Patients' Hospital Library	
Bed Authorization	Volumes per Patient
1 to 500	7
501 to 1 000	5

<sup>a</sup>Obtained from United States Department of the Air Force Air Force Regulation 212.1  
"Air Force Library Service" April 2, 1958

TABLE IX

1958 FLOOR SPACE ALLOWANCE STANDARDS  
FOR BASE LIBRARIES<sup>a</sup>

Installation Military Strength	Square Foot Area
1 to 999	1 500
1,000 to 2,499	2 500
2 500 to 3,999	3 500
4 000 to 5 499	4 800
5,500 to 6,999	6 000
7,000 to 9,999	7,800
10,000 to 15,000	8,500
15,001 to 20,000	11,250

<sup>a</sup>Obtained from United States Department of the Air Force Air Force Regulation 212.1  
"Air Force Library Service," April 2, 1958

TABLE X

1958 STANDARDS FOR BASE LIBRARY STAFFS<sup>a</sup>

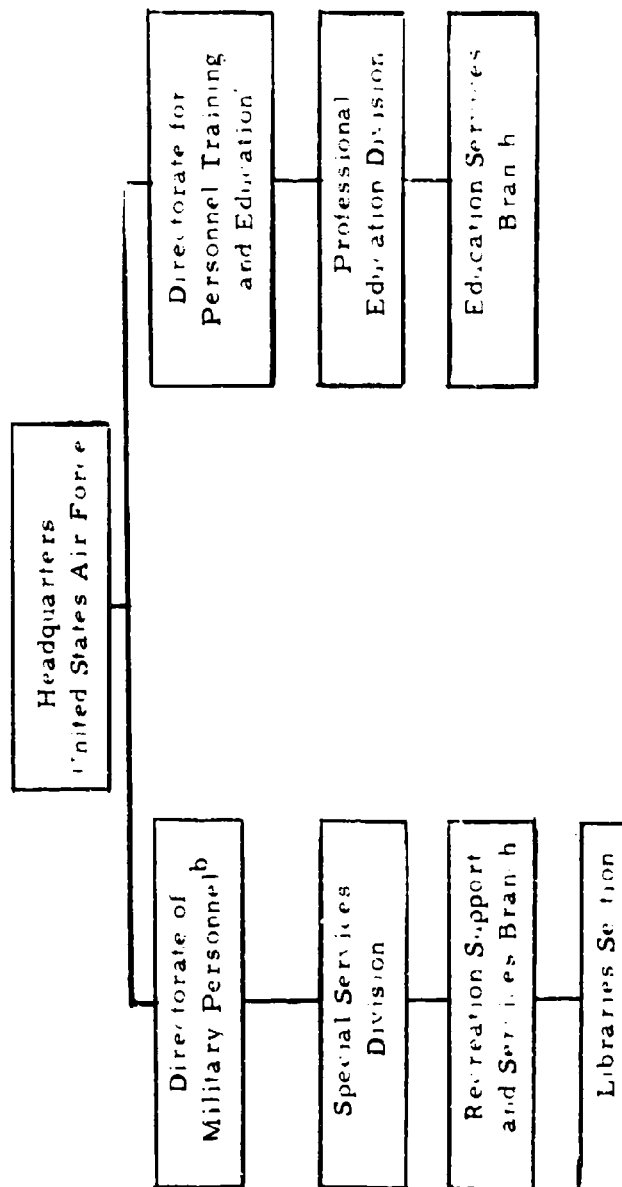
Base Population	Personnel Guidelines		
	Librarians (civilian)	Library Assistants (civilian)	Clerks <sup>b</sup>
1,000 to 3,000	1	1	1
3,001 to 5,000	1	1	2
5,001 to 7,000	1	2	2
7,001 to 8,000	2	2	2
8,001 to 11,000	2	2	3
11,000 to 20,000	3	2	3
Over 20,000	4	2	3

<sup>a</sup>Obtained from United States Department of the Air Force Air Force Regulation 212-1 "Air Force Library Service," April 2, 1958.

<sup>b</sup>The position of clerk may be filled by either a civilian or an enlisted person.

TABLE XI

STAFF ORGANIZATIONAL STRUCTURE FOR LIBRARIES AND EDUCATION  
AT HEADQUARTERS UNITED STATES AIR FORCE<sup>a</sup>



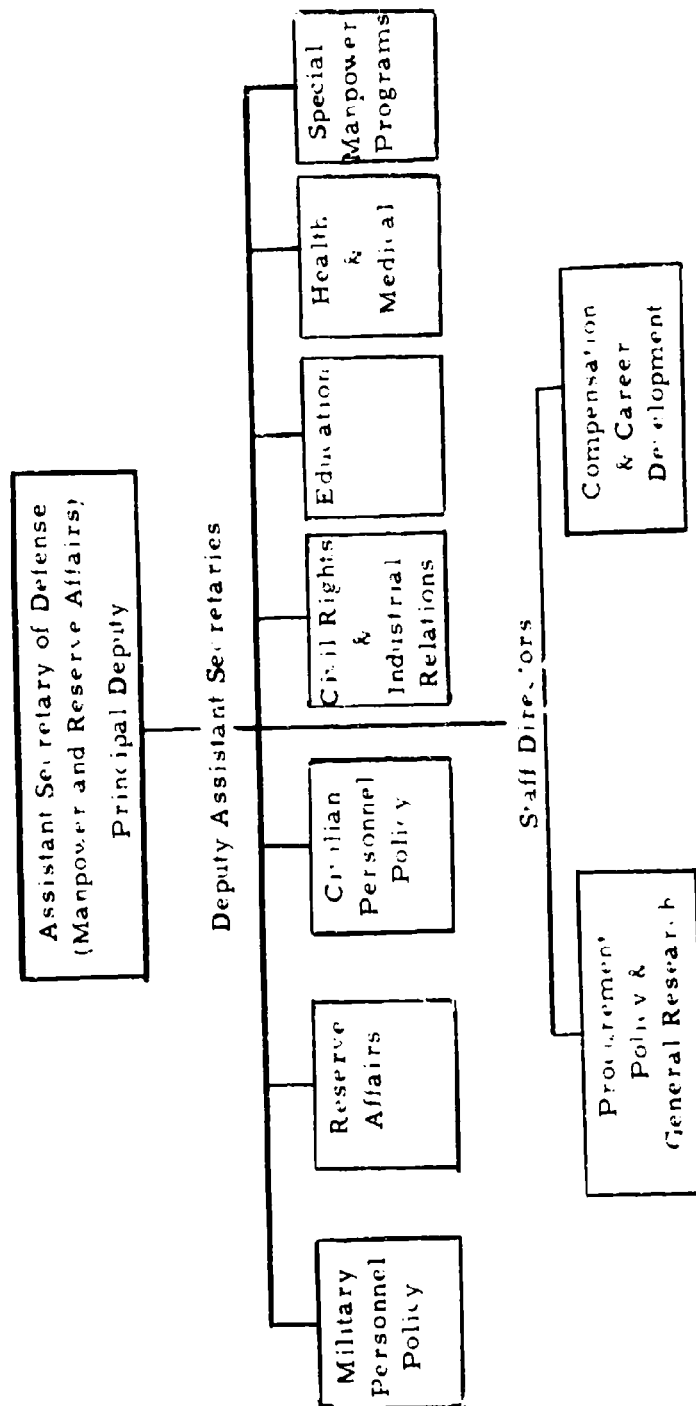
<sup>a</sup>Information for this table was obtained by telephoned interviews with John L. Cook, Director of Air Force Library Services, on August 14, 1968, and by telephoned interview with Robert W. Quirk, Chief, Education Services, Headquarters United States Air Force, on the same date.

<sup>b</sup>Located at Randolph Air Force Base, Texas, since 1963.

Located in Washington, D.C., at the Pentagon or in nearby office buildings.

TABLE XII

ORGANIZATION OF THE OFFICE OF THE ASSISTANT SECRETARY OF DEFENSE  
(MANPOWER AND RESERVE AFFAIRS)<sup>a</sup>



<sup>a</sup> Derived From United States Department of Defense Organization Chart of the Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs) July 1968

TABLE XIII

CLAPP AND JORDAN FORMULA FOR ESTIMATING THE SIZE FOR LIMINAL ADEQUACY  
OF THE COLLECTIONS OF SENIOR COLLEGE AND UNIVERSITY LIBRARIES<sup>a</sup>

	Books			Periodicals		Docu- ments <sup>b</sup>		Total
	Titles (2)	Volumes (3)	Titles (4)	Volumes (5)	Volumes (6)	Volumes (7)		
<u>To a basic collection, viz.,</u>								
1. Undergraduate library	35 000	42 000	250	3 750	5 000	50 750		
<u>Add for each of the following as indicated.</u>								
2 Faculty member (full time equivalent).	50	60	1	15	25	100		
3 Student (graduate or undergraduate in full time equivalents)	..	10	..	1	1	12		
4. Undergraduate in honors or independent study programs	10	12	..	..	..	12		
5 Field of undergraduate concentration. "major" subject field	200	240	3	45	50	335		
6 Field of graduate concentration. Master's work or equivalent	2 000	2 400	10	150	500	3 050		
7 Field of graduate concentration. Doctoral work or equivalent	15 000	18 000	100	1 500	5 000	24 500		

TABLE XIII (continued)

<sup>a</sup>Source Verner W. Clapp and Robert T. Jordan, "Quantitative Criteria for Adequacy of Academic Library Collections," College and Research Libraries XXVI (September, 1965), 374-375

<sup>b</sup>Includes documents of the United Nations, the United States Government and state, county and local governments



APPENDIX D

SURVEY AND EVALUATION TABLES

TABLE XIV

UNITED STATES AIR FORCE BASE LIBRARIES INCLUDED IN THE STUDY,  
BY MAJOR AIR COMMAND OR SEPARATE OPERATING AGENCY

Aerospace Defense Command Bases	
Condon Air Force Station, Oregon Ent Air Force Base, Colorado Hamilton Air Force Base, California Kincheloe Air Force Base, Michigan Kingsley Field, Oregon McChord Air Force Base, Washington	Otis Air Force Base, Massachusetts Paine Field, Washington Richards-Gebaur Air Force Base, Missouri Sioux City Air Base, Iowa Suffolk County Air Force Base, New York Tyndall Air Force Base, Florida
Air Force Logistics Command Bases	
Hill Air Force Base, Utah Robins Air Force Base, Georgia	Wright-Patterson Air Force Base, Ohio
Air Training Command Bases	
Chanute Air Force Base, Illinois Keesler Air Force Base, Mississippi	Lowry Air Force Base, Colorado Vance Air Force Base, Oklahoma
Air University	
Maxwell Air Force Base, Alabama <sup>a</sup>	
Headquarters Command Bases	
Andrews Air Force Base, Maryland	Bolling Air Force Base, District of Columbia

TABLE XIV (continued)

Military Airlift Command Bases	
Charleston Air Force Base, South Carolina	McGuire Air Force Base, New Jersey
Dover Air Force Base, Delaware	Norton Air Force Base, California
Strategic Air Command Bases	
Arcus Air Force Base, Oklahoma	K. I. Sawyer Air Force Base, Michigan
Barksdale Air Force Base, Louisiana	Little Rock Air Force Base, Arkansas
Beale Air Force Base, California	Loring Air Force Base, Maine
Carswell Air Force Base, Texas	McCoy Air Force Base, Florida
Castle Air Force Base, California	Maimstrom Air Force Base, Montana
Clinton-Sherman Air Force Base, Oklahoma	March Air Force Base, California
Columbus Air Force Base, Mississippi	Minot Air Force Base, North Dakota
Davis-Monthan Air Force Base, Arizona	Offutt Air Force Base, Nebraska
Dyess Air Force Base, Texas	Pease Air Force Base, New Hampshire
Ellsworth Air Force Base, South Dakota	Plattsburgh Air Force Base, New York
Fairchild Air Force Base, Washington	Vandenberg Air Force Base, California
Francis E. Warren Air Force Base, Wyoming	Westover Air Force Base, Massachusetts
Grand Forks Air Force Base, North Dakota	Whiteman Air Force Base, Missouri
Griessom Air Force Base, Indiana <sup>b</sup>	Wurtsmith Air Force Base, Michigan
Tactical Air Command Bases	
Bergstrom Air Force Base, Texas	MacDill Air Force Base, Florida
England Air Force Base, Louisiana	Mountain Home Air Force Base, Idaho
Forbes Air Force Base, Kansas	Myrtle Beach Air Force Base, South Carolina
George Air Force Base, California	Nellis Air Force Base, Nevada
Hurlburt Field, Florida	Pope Air Force Base, North Carolina
Langley Air Force Base, Virginia	Sewart Air Force Base, Tennessee
Lockbourne Air Force Base, Ohio	Seymour Johnson Air Force Base, North Carolina
Luke Air Force Base, Arizona	Shaw Air Force Base, South Carolina

TABLE XIV (continued)

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United States Air Force  
Security Service

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Goodfellow Air Force Base, Texas

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<sup>a</sup>The Air University Library, located at Maxwell Air Force Base, Alabama, has the responsibility for supporting the college level, off-duty education programs not only at Maxwell Air Force Base but also at nearby Gunter Air Force Base, according to information contained in a letter of September 25, 1967, from Robert Severance, Director, Air University Library to Colonel George V. Fagan, Director of the United States Air Force Academy Library. Accordingly, the base libraries of Maxwell and Gunter were not surveyed, and the Air University Library was included.

<sup>b</sup>Formerly designated Bunker Hill Air Force Base, this installation was renamed Grissom Air Force Base on May 12, 1968, by authority of United States Department of the Air Force Special Order GA-19 dated May 1, 1968 in memory of the late Lieutenant Colonel Virgil I. Grissom, one of the astronauts who had been prominent in the United States exploration of outer space.

TABLE XV  
EVALUATION FORMULA FOR BASE LIBRARIES SUPPORTING UNDERGRADUATE AND GRADUATE  
EDUCATION PROGRAMS

Section or Subsection	Item	Percent in Collection	Number in Collection	Points
I-A	Books on required reading lists	90-100	.	120
		80-89	.	105
		70-79	.	90
		60-69	.	75
		50-59	.	60
		40-49	.	45
		30-39	.	30
		20-29	.	15
		0-19	.	0
			.	
I-B	Books on recommended reading lists	80-100	.	75
		60-79	.	60
		40-59	.	45
		20-39	.	30
		10-19	.	15
		0-9	.	0
			.	
			.	
			.	
			.	
I-C	Total book titles in each major curriculum-related subject category	Undergraduate	Graduate	
		150+	180+	60
		125-149	150-179	50
		100-124	120-149	40
		75-99	90-119	30
		50-74	60-89	20
		25-49	30-59	10
		0-24	0-29	0

TABLE XV (continued)

Section or Subsection	Item	Percent in Collection	Number in Collection	Points
I-D	Current book titles in each major curriculum-related subject category		Under-graduate	
			Graduate	
			100+	45
			90-99	40
			80-89	35
			70-79	30
			60-69	25
			50-59	20
			40-49	15
			30-39	10
			20-29	5
			0-19	0
			120+	45
			108-119	40
			96-107	35
			84-95	30
			72-83	25
			60-71	20
			48-59	15
			36-47	10
			24-35	5
			0-23	0

NOTE: If Subsection I-A is not applicable, multiply the point scores awarded in Subsection I-B, I-C, and I-D by 1.66. If Subsection I-B is not applicable, multiply the point scores awarded in Subsection I-A, I-C, and I-D by 1.33. If Subsections I-A and I-B are not applicable, multiply the point scores awarded in Subsections I-C and I-D by 2.86.

TABLE XV (continued)

Section or Subsection	Item	Percent in Collection	Number in Collection	Points
II-A	Periodicals and newspapers on required reading lists	90-100	.	125
		80-89	.	110
		70-79	.	95
		60-69	.	80
		50-59	.	65
		40-49	.	50
		30-39	.	35
		20-29	.	20
		0-19	.	0

NOTE: If Subsection II-A is not applicable, multiply the point score awarded in Subsection II-B by 2 66. If Subsection II-B is not applicable, multiply the point score awarded in Subsection II-A by 1.6. If neither Subsection II-A nor Subsection II-B is applicable, the maximum possible point score for the evaluation formula will be reduced by 200 points.

TABLE XV ( continued)

Section or Subsection	Item	Percent in Collection	Number in Collection	Points
II-B	Periodicals and newspapers on recommended reading lists	80-100	.	75
		60-79	.	60
		40-59	.	45
		20-39	.	30
		10-19	.	15
		0-9	.	0
III-A	Basic indexes and abstracts			
	a. <u>Readers' Guide to Periodical Literature</u> (unabridged)		1 of <u>a</u> and <u>b</u> 1 of <u>a</u> only 1 of <u>b</u> only	40 30 10
	b. <u>Air University Library Index to Military Periodicals</u>			
III-B	Supplementary indexes and abstracts			
	a. <u>Social Sciences and Humanities Index</u>		1 of <u>a</u> , <u>b</u> , and <u>c</u> 1 of <u>a</u> and <u>b</u> only 1 of <u>b</u> and <u>c</u> only 1 of <u>a</u> only 1 of <u>b</u> only 1 of <u>c</u> only	10 10 10 5 5 5



TABLE XV (continued)

Section or Subsection	Item	Percent in Collection	Number in Collection	Points
III-C	b. <u>Applied Science and Technology Index</u>			
	c. <u>PAIS (Public Affairs Information Service)</u>			
	Specialized indexes and abstracts relating to graduate courses	90-100		50
		80-89		45
		70-79		40
		60-69		35
		50-59		30
		40-49		25
		30-39		20
		20-29		15
		10-19		10
		1-9		5
IV-A	Current unabridged dictionaries			
	a. <u>Webster's Third New International Dictionary</u>		1 of a or b	20

NOTE: If Subsection III-C is not applicable, double the point score awarded in Subsection III-A and Subsection III-B.

TABLE XV (continued)

Section or Subsection	Item	Percent in Collection	Number in Collection	Points
IV-B	b. Random House Dictionary of English Usage			
	Supplementary unabridged dictionaries			
	a. Webster's New International Dictionary (2d ed.)		1 of a or b	10
IV-C	b. Any other unabridged dictionary with a copyright date later than 1950			
	Specialized dictionaries relating to graduate courses	90-100		20
		80-89		18
		70-79		16
		60-69		14
		50-59		12
		40-49		10
		30-39		8
		20-29		6
		10-19		4
		1-9		2

NOTE: If Subsection IV-C is not applicable, multiply the point score awarded in Subsection IV-B and Subsection IV-C by 1.65.

TABLE XV (continued)

Section or Subsection	Item	Percent in Collection	Number in Collection	Points
V-A	General encyclopedias		1 of <u>a</u> , <u>b</u> , or <u>c</u>	50
	a. <u>Encyclopaedia Britannica</u>			
	b. <u>Encyclopedia Americana</u>			
	c. <u>Collier's Encyclopedia</u>			
V-B	Specialized encyclopedias relating to graduate courses	90-100		50
		80-89		45
		70-79		40
		60-69		35
		50-59		30
		40-49		25
		30-39		20
		20-29		15
		10-19		10
		1-9		5

NOTE: If Subsection V-B is not applicable, double the point score awarded in Subsection V-A.

TABLE XV (continued)

Section or Subsection	Item	Percent in Collection	Number in Collection	Points
VI	Hours of professional reference service available each week			
	a. 40 hours or more, including at least 12 hours after normal duty hours			100
	b. 40 hours or more, including at least 9 hours after normal duty hours			90
	c. 40 hours or more, including at least 6 hours after normal duty hours			80
	d. 40 hours or more, including at least 3 hours after normal duty hours			70
	e. 40 hours or more, not including time after normal duty hours			60
	f. 20 hours or more, but less than 40			50

TABLE XV (continued)

Section or Subsection	Item	Points
VII	g. Less than 20 hours	
	Supplementary Data	
	a. Duplicate copies of more than 50% of books on required reading lists	10
	b. Substantially unbroken run of at least 50% of periodicals on required reading lists, covering the preceding 3-year period or more	10
	c. Substantially unbroken run of at least 50% of periodicals on recommended reading lists, covering the preceding 3-year period or more	5
	d. Substantially unbroken run of <u>Readers' Guide to Periodical Literature</u> , covering the preceding 3-year period or more	10
	e. Substantially unbroken run of at least 50% of specialized indexes and abstracts relating to graduate courses, covering the preceding 3-year period or more	10
	f. Available microtext materials	10
	g. Availability of other suitable libraries:	60
	(1) Library of sponsoring institution	
	(2) Library of other college or university (when library of sponsoring institution is not readily available, i.e., within 50 miles)	40
	(3) Public library only	20

NOTE: (Subsection VII-a) If the questionnaire contained no required reading list of books, Subsection VII-a is not applicable, and 10 points should be added to the total awarded in Subsection VII-g.

(Subsection VII-b) If the questionnaire contained no required reading list of periodicals, Subsection VII-b is not applicable, and 10 points

TABLE XV (continued)

Section or Subsection	Item	Points
	should be added to the total awarded in Subsection VII-g. (Subsection VII-c) If the questionnaire contained no recommended reading list of periodicals, Subsection VII-c is not applicable, and 5 points should be added to the total awarded in Subsection VII-g.	
	(Subsection VII-e) If the questionnaire contained no list of specialized indexes and abstracts relating to graduate courses, Subsection VII-e is not applicable, and 10 points should be added to the total awarded in Subsection VII-g.	
	Summary of relative values: Section I (Books), 30%; Section II, Periodicals and Newspapers, 20%; Section III, Indexes and Abstracts, 10%; Section IV, Dictionaries, 5%; Section V, Encyclopedias, 10%; Section VI, Professional Reference Service, 10%; and Section VII, Supplementary Data, 15%.	
	Scoring procedure:	
	1. Add the points awarded in Sections I through VII, to obtain the raw score.	
	2. Divide the raw score by the maximum possible score. The maximum possible score is 1,000 except in those instances in which Subsection II-A, Periodicals and Newspapers or Required Reading Lists, and Subsection II-B, Periodicals and Newspapers or Recommended Reading Lists, were not applicable. If both Subsection II-A and Subsection II-B were not applicable, the maximum possible score is 300. The division of the raw score by the maximum possible score provides the percentage score which is the basis of the adjectival rating assigned to the library.	
	3. Record the percentage score and the appropriate adjectival rating, based on the following scale:	
	90-100% = Excellent	60-69% = Satisfactory
	80-89% = Very Good	0-59% = Unsatisfactory
	70-79% = Good	

TABLE XXII  
EDUCATION PROGRAMS OF AIR FORCE BASES SURVEYED, AS OF FALL TERM OF 1967

Base Number	Undergraduate Courses	Undergraduate Enrollment	Graduate Courses	Graduate Enrollment	Total Enrollment
1	26	517	0	0	517
2	31	727	2	35	762
3	13	271	8	116	387
4	9	135	2	21	156
5	4	125	2	53	178
6	1	18	0	0	18
7	4	101	0	0	101
8	18	439	1	15	454
9	7	130	0	0	130
10	4	64	0	0	64
11	10	259	0	0	259
12	10	165	0	0	165
13	3	59	0	0	59
14	13	195	0	0	195
15	2	32	0	0	32
16	11	79	0	0	79
17	15	311	0	0	311
18	16	347	0	0	347
19	21	348	0	0	348
20	6	60	2	17	77
21	6	124	0	0	124
22	10	224	0	0	224
23	14	321	0	0	321
24	5	149	0	0	149
25	9	123	0	0	123

TABLE XXII (continued)

Base Number	Undergraduate		Undergraduate		Graduate		Graduate		Total	
	Courses	Enrollment	Courses	Enrollment	Courses	Enrollment	Courses	Enrollment	Courses	Enrollment
26	9	146	0	0	0	0	0	0	0	146
27	1	32	0	0	0	0	0	0	0	32
28	6	108	0	0	0	0	0	0	0	108
29	20	359	15	293	0	0	0	0	0	652
30	13	128	0	0	0	0	0	0	0	128
31	2	5	1	9	0	0	0	0	0	14
32	5	85	3	64	0	0	0	0	0	142
33	23	746	0	0	0	0	0	0	0	746
34	12	425	0	0	0	0	0	0	0	425
35	24	285	2	5	0	0	0	0	0	290
36	0	0	2	95	0	0	0	0	0	95
37	16	430	1	24	0	0	0	0	0	454
38	43	639	2	20	0	0	0	0	0	659
39	13	278	0	0	0	0	0	0	0	278
40	0	0	1	19	0	0	0	0	0	19
41	24	452	5	107	0	0	0	0	0	559
42	16	230	14	375	0	0	0	0	0	605
43	4	58	2	14	0	0	0	0	0	72
44	16	328	1	9	0	0	0	0	0	337
45	7	121	1	15	0	0	0	0	0	136
46	12	153	0	0	0	0	0	0	0	153
47	9	143	0	0	0	0	0	0	0	143
48	12	200	2	32	0	0	0	0	0	232
49	22	383	0	0	0	0	0	0	0	383
50	21	334	3	22	0	0	0	0	0	356
51	12	168	0	0	0	0	0	0	0	168
52	11	250	3	51	0	0	0	0	0	301



TABLE XXII (continued)

Base Number	Undergraduate Courses	Undergraduate Enrollment	Graduate Courses	Graduate Enrollment	Total Enrollment
53	13	294	0	0	294
54	5	84	0	0	84
55	13	291	3	31	322
56	28	317	0	0	317
57	21	428	0	0	428
58	6	182	0	0	182
59	14	358	3	63	421
60	7	63	2	40	103
61	11	155	4	69	224
62	11	287	0	0	287
63	23	523	5	147	670
64	24	484	0	0	484
65	7	139	1	6	145
66	19	345	1	45	390
67	8	158	9	187	345
68	16	407	0	0	407
69	6	120	0	0	120
70	5	109	0	0	109
71	10	125	0	0	125
Total	868	16,678	103	1,999	18,677

TABLE XXIII

UNDERGRADUATE COURSES WITH HIGHEST ENROLLMENT  
AT AIR FORCE BASES SURVEYED, AS OF FALL TERM OF 1967

Course	Enrollment	Total Number of Bases at Which Taught
English Composition	2,285	52
Psychology	1,757	40
United States History	1,348	46
Accounting	1,111	42
Algebra	952	41
Economics	866	38
Sociology	780	31
American Government	626	31
Western Civilization	515	21
Education	446	19
Management	404	19
Business Law	398	20
Data Processing	390	14
Basic Mathematics	344	15
Spanish	303	17
Business	229	11

TABLE XXIV

GRADUATE COURSES WITH HIGHEST ENROLLMENT  
AT AIR FORCE BASES SURVEYED, AS OF FALL TERM OF 1967

Course	Enrollment	Total Number of Bases at Which Taught
Management	388	9
Education	283	12
Economics	176	4
American Foreign Policy	107	4
Engineering for Aerospace Management	93	3
Psychology	91	3
Diplomacy	75	2
Physiology of Aerospace Management	72	4
Accounting	66	4
Sociology	54	4
Human Reliability in Aerospace Management	51	2
Public Administration	49	3
Chemistry and Physics of Aircraft/Missile Propellants	32	1

TABLE XXV  
EDUCATIONAL LEVELS OF AIR FORCE LINE OFFICERS, BY RANK, AS OF 1967<sup>a</sup>

Rank	High School	Less than 2 Years of College	2 to 4 Years of College	Baccalaureate Degree	Master's Degree	Ph.D.	Unknown	Total
General Officer <sup>b</sup>	Number Percent	11 2.7	11 2.7	71 17.3	215 52.6	95 23.2	6 1.5	409
Colonel	Number Percent	598 10.0	337 5.7	1,521 25.5	2,041 34.3	1,395 23.4	66 1.1	5,959
Lieutenant Colonel	Number Percent	2,376 16.8	1,136 8.0	3,230 22.9	4,585 32.4	2,679 18.9	133 1.0	14,155 <sup>c</sup>
Major	Number Percent	3,985 14.2	2,015 7.2	4,990 17.8	12,770 45.5	4,130 14.7	157 0.6	28,064 <sup>d</sup>
Captain	Number Percent	3,629 10.0	2,311 6.3	3,582 9.8	24,214 66.5	2,668 7.3	56 -	36,471 <sup>e</sup>
Lieutenant	Number Percent	49 -	8 -	300 0.9	30,879 94.4	1,340 4.1	125 0.6	32,718 <sup>f</sup>
Total	Number Percent	10,648 9.1	5,818 4.9	13,694 11.6	74,704 63.4	12,307 10.5	543 0.5	117,776

<sup>a</sup>Derived from data supplied by Programs Division, Directorate of Personnel Plans, Headquarters United States Air Force

<sup>b</sup>Includes officers in the grades of brigadier general, major general, lieutenant general and general.

TABLE XXV (continued)

- |   |   |
|---|---|
| c | Total includes thirteen officers who are not high school graduates. |
| d | Total includes fifteen officers who are not high school graduates.  |
| e | Total includes six officers who are not high school graduates.      |
| f | Total includes one officer who is not a high school graduate.       |

TABLE XXVI  
 REPORTED REQUIRED AND RECOMMENDED READINGS OF CIVILIAN COLLEGE AND UNIVERSITY INSTRUCTORS  
 IN OFF-DUTY EDUCATION PROGRAMS AT BASES SURVEYED, AS OF FALL TERM OF 1967

Base Number	Under- graduate Only	Graduate Only	Undergraduate and Graduate	Books		Newspapers & Periodicals	
				Required	Recommended	Required	Recommended
1	x			13	88	6	18
2			x	66	341	1	10
3			x	29	20	0	5
4			x	1	73	0	19
5			x	4	23	2	1
6	x			0	5	0	0
7	x			2	0	0	0
8			x	0	7	1	7
9	x			0	0	0	0
10	x			4	0	0	0
11	x			4	10	0	0
12	x			7	1	0	2
13	x			0	8	0	3
14	x			0	0	0	0
15	x			0	0	0	0
16	x			13	274	5	1
17	x			4	118	0	22
18	x			4	94	0	12
19	x			5	7	0	9
20			x	17	22	0	8
21	x			0	0	0	0
22	x			0	41	0	9
23	x			3	4	0	1
24	x			9	1	3	0
25	x			2	12	1	1

TABLE XXVI (continued)

Base Number	Undergraduate Only	Graduate Only	Undergraduate and Graduate	Books		Newspapers & Periodicals	
				Required	Recommended	Required	Recommended
26	x	.	.	0	1	0	0
27	x	.	.	3	0	2	0
28	x	.	.	5	5	0	2
29	.	.	x	22	67	0	5
30	x	.	.	3	0	2	3
31	.	.	x	3	20	0	2
32	.	.	x	10	0	0	0
33	x	.	.	63	35	7	29
34	x	.	.	20	177	0	28
35	.	.	x	55	5	0	0
36	.	x	.	5	0	11	0
37	.	.	x	16	161	0	0
38	.	.	x	3	132	7	13
39	x	.	.	7	148	1	9
40	.	x	.	15	17	0	0
41	.	.	.	14	74	7	33
42	.	.	x	51	528	5	46
43	.	.	x	0	0	0	0
44	.	.	x	27	34	8	11
45	.	.	x	62	39	17	28
46	x	.	.	5	5	7	5
47	x	.	.	0	2	0	0
48	.	.	x	13	57	1	9
49	x	.	.	0	0	0	0
50	.	.	x	12	1	0	0

TABLE XXVI (continued)

Base Number	Under- graduate Only	Graduate Only	Undergraduate and Graduate	Books		Newspapers & Periodicals	
				Required	Recommended	Required	Recommended
51	x	.	.	2	310	0	3
52	.	.	x	0	0	0	0
53	x	.	.	5	3	0	4
54	x	.	.	0	3	0	12
55	.	.	.	0	0	0	0
56	x	.	.	5	1	0	7
57	x	.	.	0	0	0	0
58	x	.	.	10	0	0	4
59	.	.	.	4	9	0	3
60	.	.	x	30	362	0	0
61	.	.	x	29	137	1	24
62	.	.	.	12	0	0	0
63	x	.	x	3	41	0	42
64	.	.	.	5	12	0	6
65	x	.	x	0	0	0	0
66	.	.	x	3	86	3	88
67	.	.	x	389	829	0	12
68	.	.	.	2	14	0	7
69	x	.	.	0	0	0	0
70	x	.	.	1	0	0	2
71	x	.	.	0	0	0	0
Total	41	2	28	1,101	4,464	98	565



TABLE XXVII

TITLES OF PERIODICALS AND NEWSPAPERS REPORTED ON SIX OR MORE REQUIRED OR  
 RECOMMENDED READING LISTS OF COLLEGE AND UNIVERSITY INSTRUCTORS  
 OF OFF-DUTY EDUCATION PROGRAMS AT AIR FORCE BASES SURVEYED,  
 AS OF FALL TERM OF 1967

Periodical or Newspaper Title	Total Number of Base Reading Lists on Which Reported
Atlantic . . . . .	9
Business Week . . . . .	13
Fortune . . . . .	9
Harper's . . . . .	10
Harvard Business Review . . . . .	11
Journal of Applied Psychology . . . . .	7
Journal of Educational Research . . . . .	6
NEA Journal (National Education Association) . . . . .	6
New Republic . . . . .	6
Newsweek . . . . .	13
New York Times . . . . .	14
Saturday Review . . . . .	9
Scientific American . . . . .	6
Time . . . . .	15
U. S. News and World Report . . . . .	18

TABLE XXVIII  
SUPPORT OF AIR FORCE BASE LIBRARIES BY COLLEGES AND UNIVERSITIES AFFILIATED WITH  
OFF-DUTY EDUCATION PROGRAMS, AND BY BASE EDUCATION OFFICES, AS OF FALL TERM OF 1967

Summary of Reported Support	Air Force Base Numbers
College or university library operated a branch in the classroom area where courses were taught on the base . . . . .	33, 35
University extension center maintained a library in a nearby public library. . . . .	31
College or university library placed on deposit in the base library a reserve shelf of library materials. . . . .	4, 7, 14, 18, 23, 44, 45, 48, 54 and 56
Instructors or administrators obtained needed library materials from the university library. . . . .	6, 16 and 40
At least one of the affiliated colleges or universities located within fifty miles of the base made available to Air Force students of the off-duty education program full library services and resources . . . . .	2, 3, 5, 8, 12, 22, 41, 42, 46, 47, 49, 51, 57 and 58
University library bookmobile provided access to "reference only" books. . . . .	2, 5
University instructors supplied books and other materials from their personal libraries. . . . .	6, 45

TABLE XXVIII (continued)

Summary of Reported Support	Air Force Base Numbers
College or university offered to provide, or did provide, funds to the base library . . . . .	19, <sup>a</sup> 57
Base education services officer coordinated purchase of library materials by the library in support of the college or university program . . . . .	5, 6, 8, 23, 28, 30, 44, 45 and 54

<sup>a</sup>At base number 19 there appeared a substantial difference of opinion as to the measure of support given by the university. The institution had previously allotted \$2,500 to the base library in support of the on-base education program. The base education services officer reported, however, that considerable difficulty had been experienced in obtaining instructor recommendations for expenditure of the \$2,500. He also indicated that through his own office he obtained for the base library approximately \$40,000 for the purchase of 2,500 reels of microfilm.

TABLE XXIX  
LIBRARY QUESTIONNAIRE PERCENTAGE SCORES, BY QUESTIONNAIRE NUMBER

Questionnaire Number	Percentage Score	Adjectival Rating	Questionnaire Number	Percentage Score	Adjectival Rating
29	90	Excellent	63	49	Unsatisfactory
23	77	Good	16, 42	48	
70	73		64	47	
9, 47, 59	72	Satisfactory	18, 31	46	
34	70		5, 10, 49	45	
			41	44	
			17, 71	43	
2, 28	69		6, 21, 66	42	
24	68		35	40	
30, 46	67		61	39	
22	66		45, 57	38	
62, 68	65		58	36	
36	63		50, 55	35	
3, 11	62		8	33	
32, 38	61		43	28	
54	60		7, 52	24	
			15	23	
19, 44, 65	59	Unsatisfactory			
37, 53	58				
12, 33, 48	57				
1, 51	56				
14, 20, 26, 39	55				
13, 27	54				
40, 60	53				
4, 56, 69	52				
25, 67	51				

TABLE XXX  
SUMMARY OF LIBRARY QUESTIONNAIRE PERCENTAGE SCORES,  
BY MAJOR AIR COMMAND OR SEPARATE OPERATING AGENCY

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Partici- pating	Total Number with Scores of 90-100%	Total Number with Scores of 80-89%	Total Number with Scores of 70-79%	Total Number with Scores of 60-69%	Total Number with Scores of 0-59%	Mean Score	Median Score
ADC	12	0	0	1	1	10	47.3	49.5
AFLC	3	0	0	0	2	1	58.0	61.0
ATC	4	0	0	0	1	3	56.8	56.5
AU	1	1	0	0	0	0	90.0	90.0
HQ COMD	2	0	0	0	2	0	65.5	65.5
MAC	4	0	0	1	1	2	57.5	60.0
SAC	28	0	0	2	4	22	49.8	50.0
TAC	16	0	0	2	3	11	56.3	54.5
USAFSS	1	0	0	0	0	1	52.0	52.0
Total	71	1	0	6	14	50	53.1	54.0

<sup>a</sup>Legend: ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command;  
ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC =  
Military Airlift Command; SAC = Strategic Air Command; TAC = Tactical Air Command;  
USAFSS = United States Air Force Security Service.

TABLE XXXI  
LIBRARY QUESTIONNAIRE PERCENTAGE SCORES, GROUPED BY LEVEL OF ACADEMIC PROGRAM SUPPORTED

Libraries Supporting Undergraduate Programs Only				Libraries Supporting Graduate Programs Only or Combinations of Graduate and Undergraduate Programs			
Questionnaire Number	Percentage Score	Questionnaire Number	Percentage Score	Questionnaire Number	Percentage Score	Questionnaire Number	Percentage Score
1	56	27	54	2	69	42	48
6	42	28	69	3	62	43	28
7	24	30	67	4	52	44	59
9	72	33	57	5	45	45	38
10	45	34	70	8	33	48	57
11	62	39	55	20	55	50	35
12	57	46	67	29	90	52	24
13	54	47	72	31	46	55	35
14	55	49	45	32	61	59	72
15	23	51	56	35	40	60	53
16	48	53	58	36	63	61	39
17	43	54	60	37	58	63	49
18	46	56	52	38	61	65	59
19	59	57	38	40	53	66	42
21	42	58	36	41	44	67	51
22	66	62	65				
23	77	64	47				
24	68	68	65				
25	51	69	52				
26	55	70	73				
		71	43				

TABLE XXXII  
PERCENTAGES OF BOOK TITLES ON REQUIRED READING LISTS IN LIBRARIES SURVEYED

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Partici- pating	90- 100%	80- 89%	70- 79%	60- 69%	50- 59%	40- 49%	30- 39%	20- 29%	0- 19%	Not Applicable
ADC	12	0	0	0	0	1	0	0	2	3	6
AFLC	3	0	1	0	1	0	0	0	0	1	0
ATC	4	0	0	0	1	0	2	0	0	1	0
AU	1	1	0	0	0	0	0	0	0	0	0
HQ COMD	2	0	0	0	1	0	0	0	0	1	0
MAC	4	2	0	0	0	0	1	0	0	1	0
SAC	28	2	3	0	4	2	1	1	1	6	8
TAC	16	2	0	1	3	0	0	1	2	2	5
USAFSS	1	1	0	0	0	0	0	0	0	0	0
Total	71	8	4	1	10	3	4	2	5	15	19

<sup>a</sup>Legend: ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command;  
ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC =  
Military Airlift Command; SAC = Strategic Air Command; TAC = Tactical Air Command; USAFSS =  
United States Air Force Security Service.

TABLE XXXIII  
PERCENTAGES OF BOOK TITLES ON RECOMMENDED READING LISTS IN LIBRARIES SURVEYED

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Participating	80-100 Percent	60-79 Percent	40-59 Percent	20-39 Percent	10-19 Percent	0-9 Percent	Not Applicable
ADC	12	2	0	2	1	1	1	5
AFLC	3	0	0	0	0	1	0	2
ATC	4	0	1	0	2	0	1	0
AU	1	1	0	0	0	0	0	0
HQ COMD	2	0	0	0	1	1	0	0
MAC	4	1	0	2	0	0	0	1
SAC	28	1	2	4	5	5	3	8
TAC	16	2	1	0	3	2	3	5
USAFSS	1	0	0	0	1	0	0	0
Total	71	7	4	8	13	10	8	21

<sup>a</sup>Legend: ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command, ATC = Air Training Command, AU = Air University, HQ COMD = Headquarters Command, MAC = Military Airlift Command, SAC = Strategic Air Command, TAC = Tactical Air Command; USAFSS = United States Air Force Security Service.



TABLE XXXIV

MINIMUM BOOK TITLES AVAILABLE IN EACH MAJOR CURRICULUM-RELATED SUBJECT CATEGORY  
IN THE COLLECTIONS OF BASE LIBRARIES SUPPORTING ONLY UNDERGRADUATE PROGRAMS

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Supporting Only Undergrad- uate Programs	150 or More Titles	125- 149 Titles	100- 124 Titles	75- 99 Titles	50- 74 Titles	25- 49 Titles	0- 24 Titles
ADC	10	2	1	0	0	3	3	1
AFLC	1	0	0	1	0	0	0	0
ATC	1	0	0	0	0	0	1	0
AU	0	-	-	-	-	-	-	-
HQ COMD	0	-	-	-	-	-	-	-
MAC	2	0	0	0	0	1	0	1
SAC	12	1	0	5	0	2	3	1
TAC	15	1	1	7	0	0	4	2
USAFSS	0	-	-	-	-	-	-	-
Total	41	4	2	13	0	6	11	5

<sup>a</sup>Legend. ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command;  
ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC =  
Military Airfield Command; SAC = Strategic Air Command; TAC = Tactical Air Command;  
USAFSS = United States Air Force Security Service.

TABLE XXXV  
 MINIMUM BOOK TITLES AVAILABLE IN EACH MAJOR CURRICULUM-RELATED SUBJECT CATEGORY  
 IN THE COLLECTIONS OF BASE LIBRARIES SUPPORTING ONLY GRADUATE PROGRAMS  
 OR COMBINATIONS OF GRADUATE AND UNDERGRADUATE PROGRAMS

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Supporting Graduate Programs or Graduate/ Under- graduate Programs	150 or More Titles per Under- graduate Category & 180 or More per Graduate Category	125-149 Titles per Under- graduate Category & 150- 179 per Graduate Category	100-124 Titles per Under- graduate Category & 120- 149 per Graduate Category	75-99 Titles per Under- graduate Category & 90- 119 per Graduate Category	50-74 Titles per Under- graduate Category & 60- 89 per Graduate Category	25-49 Titles per Under- graduate Category & 30-59 per Graduate Category	0-24 Titles per Under- graduate Category & 0-29 per Graduate Category
ADC	2	1	0	0	0	0	1	0
AFLC	2	0	0	1	0	1	0	0
ATC	3	3	0	0	0	0	0	0
AU	1	1	0	0	0	0	0	0
HQ COMD	2	1	1	0	0	0	0	0
MAC	2	1	0	0	0	0	1	0
SAC	16	3	0	3	1	2	3	4

TABLE XXXV (continued)

Major Air Command or Separate Operating Agency	Number of Libraries Supporting Graduate Programs or Undergraduate Programs	150 or More Titles per Undergraduate Category	125-149 Titles per Undergraduate Category	100-124 Titles per Undergraduate Category	75-99 Titles per Undergraduate Category	50-74 Titles per Undergraduate Category	25-49 Titles per Undergraduate Category	0-24 Titles per Undergraduate Category
TAC	1	0	0	0	0	1	0	0
USAFSS	1	0	0	0	0	0	1	0
Total	30	10	1	4	1	4	6	4

<sup>a</sup>Legend: ADC = Aerospace Defense Command, AFLC = Air Force Logistics Command; ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC = Military Air Force Command; SAC = Strategic Air Command, TAC = Tactical Air Command; USAFSS = United States Air Force Security Service.

TABLE XXXVI  
 MINIMUM CURRENT BOOK TITLES AVAILABLE IN EACH MAJOR CURRICULUM-RELATED SUBJECT CATEGORY  
 IN THE COLLECTIONS OF BASE LIBRARIES SUPPORTING ONLY UNDERGRADUATE PROGRAMS

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Supporting Titles Only Undergraduate Programs	100 or More Libraries	90-99 Titles	80-89 Titles	70-79 Titles	60-69 Titles	50-59 Titles	40-49 Titles	30-39 Titles	20-29 Titles	0-19 Titles
ADC	10	0	0	0	0	0	2	0	3	1	4
AFLC	1	0	0	0	0	0	0	0	0	1	0
ATC	1	0	0	0	0	0	0	0	0	0	1
AU	0	-	-	-	-	-	-	-	-	-	-
HQ COMD	0	-	-	-	-	-	-	-	-	-	-
MAC	2	0	0	0	0	0	0	0	0	0	2
SAC	12	0	0	0	0	0	0	1	2	5	4
TAC	15	0	0	0	0	0	0	0	1	3	11
USAFSS	0	-	-	-	-	-	-	-	-	-	-
Total	41	0	0	0	0	0	2	1	6	10	22

<sup>a</sup>Legend: ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command; ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC = Military Airlift Command; SAC = Strategic Air Command; TAC = Tactical Air Command; USAFSS = United States Air Force Security Service.

TABLE XXXVII  
MINIMUM CURRENT BOOK TITLES AVAILABLE IN EACH MAJOR CURRICULUM-RELATED SUBJECT CATEGORY  
IN THE COLLECTIONS OF BASE LIBRARIES SUPPORTING ONLY GRADUATE PROGRAMS  
OR COMBINATIONS OF GRADUATE AND UNDERGRADUATE PROGRAMS

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Supporting Graduate Programs	100 or More Titles per U. C.	90-99 Titles per U. C. and 108-119 per G. C.	80-89 Titles per U. C. and 96-107 per G. C.	70-79 Titles per U. C. and 84-95 per G. C.	60-69 Titles per U. C. and 72-83 per G. C.	50-59 Titles per U. C. and 60-71 per G. C.	40-49 Titles per U. C. and 48-59 per G. C.	30-39 Titles per U. C. and 36-47 per G. C.	20-29 Titles per U. C. and 24-35 per G. C.	0-19 Titles per U. C. and 0-23 per G. C.
ADC	2	0	0	0	0	0	0	0	1	1	0
AFLC	2	0	0	0	0	0	0	1	0	0	1
ATC	3	1	0	0	0	0	0	0	1	0	1
AU	1	1	0	0	0	0	0	0	0	0	0
HQ COMD	2	0	0	1	0	0	0	1	0	0	0
MAC	2	0	0	0	0	0	1	0	0	0	1
SAC	16	1	0	0	0	2	0	1	3	3	8
TAC	1	0	3	0	0	0	0	0	0	0	1
USAFSS	1	0	0	0	0	0	0	0	0	1	0
Total	30	3	0	1	0	0	1	3	5	5	12

<sup>a</sup>Legend: ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command; ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC = Military Airlift Command; SAC = Strategic Air Command; TAC = Tactical Air Command; USAFSS = United States Air Force Security Service.

<sup>b</sup>U. C. = Undergraduate Category; G. C. = Graduate Category.

TABLE XXXVIII  
 PERCENTAGES OF PERIODICAL AND NEWSPAPER TITLES ON REQUIRED  
 READING LISTS AVAILABLE IN LIBRARIES SURVEYED

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Participating	90- 100%	80- 89%	70- 79%	60- 69%	50- 59%	40- 49%	30- 39%	20- 29%	0- 19%	Not Applicable
ADC	12	1	0	0	0	1	0	0	0	1	9
AFLC	3	0	0	0	0	1	0	0	0	0	2
ATC	4	0	0	1	0	0	0	0	0	1	2
AU	1	0	0	0	0	0	0	0	0	0	1
HQ COMD	2	1	0	0	0	0	0	0	0	0	1
MAC	4	0	0	1	0	0	0	0	1	0	2
SAC	28	1	1	1	1	0	1	0	0	3	20
TAC	16	1	0	0	2	1	0	0	0	0	12
USAFSS	1	0	0	0	0	0	0	0	0	0	1
Total	71	4	1	3	3	3	1	0	1	5	50

<sup>a</sup>Legend. ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command, ATC = Air Training Command, AU = Air University; HQ COMD = Headquarters Command, MAC = Military Airlift Command, SAC = Strategic Air Command, TAC = Tactical Air Command; USAFSS = United States Air Force Security Service.

TABLE XXXIX  
 PERCENTAGES OF PERIODICAL AND NEWSPAPER TITLES ON RECOMMENDED  
 READING LISTS AVAILABLE IN LIBRARIES SURVEYED

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Participating	80-100 Percent	60-79 Percent	40-59 Percent	20-39 Percent	10-19 Percent	0-9 Percent	Not Applicable
ADC	12	0	0	2	1	0	2	7
AFLC	3	1	0	1	0	0	0	1
ATC	4	2	0	0	0	0	0	2
AU	1	0	1	0	0	0	0	0
HQ COMD	2	1	0	0	1	0	0	0
MAC	4	0	1	1	0	0	0	2
SAC	28	2	1	4	7	3	1	10
TAC	16	3	1	3	1	0	2	6
USAFSS	1	0	0	0	1	0	0	0
Total	71	9	4	11	11	3	5	28

<sup>a</sup>Legend ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command; ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC = Military Airlift Command; SAC = Strategic Air Command; TAC = Tactical Air Command; USAFSS = United States Air Force Security Service.

TABLE XL  
TOTAL NUMBER OF LIBRARIES WITH NAMED INDEXES IN THEIR COLLECTIONS

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Participating	Readers' Guide to Periodical Literature (unabridged) <sup>b</sup>	Air University Library Index to Military Periodicals	Social Sciences and Humanities Index	Applied Science and Technology Index	PAIS (Public Affairs Information Service)
ADC	12	9	4	0	0	0
AFLC	3	3	2	0	2	0
ATC	4	3	2	0	3	0
AU	1	1	1	1	1	1
HQ COMD	2	2	2	1	2	1
MAC	4	3	1	0	1	0
SAC	28	19	17	0	0	1
TAC	16	14	15	0	0	0
USAFSS	1	1	0	0	0	0
Total	71	55	44	2	9	3

<sup>a</sup>Legend ADC = Aerospace Defense Command, AFLC = Air Force Logistics Command; ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC = Military Airlift Command, SAC = Strategic Air Command, TAC = Tactical Air Command, USAFSS = United States Air Force Security Service.

<sup>b</sup>Substantially unbroken runs of this title, covering a three-year period, were in the collections of the total numbers of libraries within the named commands: ADC, 7; TAC, 5; SAC, 13; AFLC, 3; ATC, 2; AU, 1, HQ COMD, 1; and MAC, 1.



TABLE XLI  
PERCENTAGES OF REQUIRED SPECIALIZED INDEXES AND ABSTRACTS IN THE COLLECTIONS OF BASE LIBRARIES  
SUPPORTING ONLY GRADUATE PROGRAMS OR A COMBINATION OF GRADUATE AND UNDERGRADUATE PROGRAMS

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Supporting Graduate Programs or Graduate/Undergraduate Programs	90-100%	80-89%	70-79%	60-69%	50-59%	40-49%	30-39%	20-29%	10-19%	1-9%	Not Applicable
ADC	2	0	0	0	0	0	0	0	0	0	0	0
AFLC	2	1	0	0	0	0	0	0	0	0	0	0
ATC	3	0	0	0	0	0	0	0	0	0	0	1
AU	1	1	0	0	0	0	0	0	0	0	0	0
HQ COMD	2	0	0	0	0	1	0	0	0	0	0	0
MAC	2	1	0	0	0	0	0	0	0	0	0	0
SAC	16	0	0	0	0	0	0	0	1	0	0	0
TAC	1	0	0	0	0	0	0	0	0	0	0	0
USAFSS	1	0	0	0	0	0	0	0	0	0	0	0
Total	30	3 <sup>b</sup>	0	0	0	1	0	0	1	0	0	1

<sup>a</sup>Legend: ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command, ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC = Military Airlift Command, SAC = Strategic Air Command, TAC = Tactical Air Command; USAFSS = United States Air Force Security Service.

<sup>b</sup>One AFLC library, one AU library and one MAC library had in their collections substantially unbroken runs of the specialized indexes appropriate to their respective libraries, covering a three-year period or more.

TABLE XLII

## TOTAL NUMBER OF LIBRARIES WITH NAMED DICTIONARIES IN THEIR COLLECTIONS

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Participating	Webster's Third New International Dictionary	Random House Dictionary of English Usage	Webster's New International Dictionary, 2d ed.
ADC	12	9	2	9
AFLC	3	3	1	3
ATC	4	4	2	4
AU	1	1	1	1
HQ COMD	2	2	1	2
MAC	4	3	2	4
SAC	28	27	16	16
TAC	16	16	3	14
USAFSS	1	1	1	1
Total	71	66	29	54

<sup>a</sup>Legend ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command, ATC = Air Training Command, AU = Air University; HQ COMD = Headquarters Command; MAC = Military Airlift Command, SAC = Strategic Air Command, TAC = Tactical Air Command; USAFSS = United States Air Force Security Service.

TABLE XLIII  
 PERCENTAGES OF REQUIRED SPECIALIZED DICTIONARIES IN THE COLLECTIONS  
 OF BASE LIBRARIES SUPPORTING ONLY GRADUATE PROGRAMS OR A COMBINATION  
 OF GRADUATE AND UNDERGRADUATE PROGRAMS

Major Air Command or Separate Operating Agency	Number of Libraries Supporting Graduate Programs or Graduate/ Under- graduate Programs	90- 100%	80- 89%	70- 79%	60- 69%	50- 59%	40- 49%	30- 39%	20- 29%	10- 19%	1- 9%	0%	Not Applicable
ADC	2	0	0	0	0	0	0	0	0	0	0	1	1
AFLC	2	0	0	0	0	0	0	0	0	0	0	1	1
ATC	3	1	0	0	0	0	0	0	0	0	0	0	2
AU	1	1	0	0	0	0	0	0	0	0	0	0	0
HQ COMD	2	1	0	0	0	0	0	0	0	0	0	1	0
MAC	2	1	0	0	0	0	0	0	0	0	0	1	0
SAC	16	4	0	1	1	1	0	0	0	0	0	6	3
TAC	1	1	0	0	0	0	0	0	0	0	0	0	0
USAFSS	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	30	9	0	1	1	1	0	0	0	0	0	10	8

Legend: ADC = Aerospace Defense Command, AFLC = Air Force Logistics Command, ATC = Air Training Command, AU = Air University, HQ COMD = Headquarters Command, MAC = Military Airlift Command, SAC = Strategic Air Command, TAC = Tactical Air Command, USAFSS = United States Air Force Security Service.

TABLE XLIV  
TOTAL NUMBER OF LIBRARIES WITH CURRENT EDITIONS OF NAMED ENCYCLOPEDIAS IN THEIR COLLECTIONS<sup>a</sup>

Major Air Command or Separate Operating Agency <sup>b</sup>	Number of Libraries Participating	Encyclopaedia Britannica	Encyclopedia Americana	Collier's Encyclopedia
ADC	12	8	11	7
AFLC	3	2	2	2
ATC	4	3	3	2
AU	1	1	1	1
HQ COMD	2	2	2	2
MAC	4	2	3	2
SAC	28	20	14	19
TAC	16	9	12	12
USAFSS	1	1	1	1
Total	71	48	49	48

<sup>a</sup>For purposes of this study, a current edition was one having a copyright date of 1962 or later.

<sup>b</sup>Legend ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command; ATC = Air Training Command, AU = Air University; HQ COMD = Headquarters Command; MAC = Military Airlift Command, SAC = Strategic Air Command; TAC = Tactical Air Command; USAFSS = United States Air Force Security Service

TABLE XLV

PERCENTAGES OF REQUIRED SPECIALIZED ENCYCLOPEDIAS IN THE COLLECTIONS  
OF BASE LIBRARIES SUPPORTING ONLY GRADUATE PROGRAMS OR A COMBINATION  
OF GRADUATE AND UNDERGRADUATE PROGRAMS

Major Air Command or Separate Operating Agency	Number of Libraries Supporting Graduate Programs or Graduate/ Under- graduate Programs	90- 100%	80- 89%	70- 79%	60- 69%	50- 59%	40- 49%	30- 39%	20- 29%	10- 19%	1- 9%	0% Not Applicable
ADC	2	0	0	0	0	0	0	0	0	0	0	2
AFLC	2	0	0	0	0	0	0	0	0	0	0	2
ATC	3	0	0	0	0	0	0	0	0	0	0	2
AU	1	1	0	0	0	0	0	0	0	0	0	0
HQ COMD	2	0	0	0	0	0	0	0	0	0	0	2
MAC	2	0	0	0	0	0	0	0	0	0	0	1
SAC	16	0	0	0	0	1	0	0	0	0	0	7
TAC	1	0	0	0	0	1	0	0	0	0	0	0
USAFSS	1	0	0	0	0	0	0	0	0	0	0	1
Total	30	1	0	0	0	2	0	0	0	0	0	17

<sup>a</sup>Legend: ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command; ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC = Military Air Command; SAC = Strategic Air Command; TAC = Tactical Air Command; USAFSS = United States Air Force Security Service.

TABLE XLVI

PROFESSIONAL REFERENCE SERVICE AVAILABLE IN BASE LIBRARIES SUPPORTING ONLY  
UNDERGRADUATE PROGRAMS

		Hours of Professional Reference Service Available Each Week <sup>b</sup>							
		40 or More, Includ- ing at Least 12 after Normal Duty Hours	40 or More, Includ- ing at Least 9 after Normal Duty Hours	40 or More, Includ- ing at Least 6 after Normal Duty Hours	40 or More, Includ- ing at Least 3 after Normal Duty Hours	40 or More, Not Includ- ing Time after Normal Duty Hours	20 to 39 Hours	0 to 19 Hours	
Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Supporting Only Undergrad- uate Programs								
ADC	10	0	0	1	2	3	0	0	4
AFLC	1	0	0	1	0	0	0	0	0
ATC	1	0	0	0	1	0	0	0	0
AU	0	-	-	-	-	-	-	-	-
HQ COMD	0	-	-	-	-	-	-	-	-
MAC	2	0	0	0	0	2	0	0	0
SAC	12	4	0	4	0	0	4	0	0
TAC	15	2	1	4	1	5	1	1	1
USAFSS	0	-	-	-	-	-	-	-	-
Total	41	6	1	10	4	10	5	5	5

Legend: ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command; ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC = Military Airlift Command; SAC = Strategic Air Command; TAC = Tactical Air Command; USAFSS = United States Air Force Security Service.

For purposes of this study, professional reference service is that which is made available by a professional librarian who is present in the library.

TABLE XLVII

PROFESSIONAL REFERENCE SERVICE AVAILABLE IN BASE LIBRARIES SUPPORTING ONLY GRADUATE  
PROGRAMS OR A COMBINATION OF GRADUATE AND UNDERGRADUATE PROGRAMS

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Supporting Graduate Programs or Graduate/ Under- graduate Programs	Hours of Professional Reference Service Available Each Week <sup>b</sup>							
		40 or More, Includ- ing at Least 12 After Normal Duty Hours	40 or More, Includ- ing at Least 6 After Normal Duty Hours	40 or More, Includ- ing at Least 3 After Normal Duty Hours	40 or More, Not Includ- ing Time After Normal Duty Hours	20 to 39 Hours	0 to 19 Hours		
ADC	2	0	0	0	0	1	0		
AFLC	2	1	0	0	0	0	0		
ATC	3	0	1	0	0	0	0		
AU	1	1	0	0	0	0	0		
HQ COMD	2	0	0	0	0	0	0		
MAC	2	1	0	0	1	0	0		
SAC	16	5	0	6	0	3	0		
TAC	1	0	0	1	0	0	0		
USAFSS	1	0	0	0	0	1	0		
Total	30	8	1	8	1	7	4		1

<sup>a</sup>Legend: ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command; ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC = Military Airlift Command; SAC = Strategic Air Command; TAC = Tactical Air Command; USAFSS = United States Air Force Security Service.

<sup>b</sup>For purposes of this study, professional reference service is that which is made available by a professional librarian who is present in the library.

TABLE XLVIII  
TOTAL PROFESSIONAL LIBRARIANS AUTHORIZED AT BASE LIBRARIES STUDIED

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Participating	Libraries with No Librarian Authorized	Libraries with 1 Librarian Authorized	Libraries with 2 Librarians Authorized	Libraries with 3 Librarians Authorized	Libraries with 4 Librarians Authorized	Libraries with 5 or More Librarians Authorized
ADC	12	1	11	0	0	0	0
AFLC	3	0	1	2	0	0	0
ATC	4	0	1	2	0	1	0
AU	1	0	0	0	0	0	1 <sup>b</sup>
HQ COMD	2	0	1	0	1	0	0
MAC	4	0	4	0	0	0	0
SAC	28	0	26	2	0	0	0
TAC	16	0	15	1	0	0	0
USAFSS	1	0	1	0	0	0	0
Total	71	1	60	7	1	1	1

<sup>a</sup>Legend: ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command; ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC = Military Airlift Command; SAC = Strategic Air Command; TAC = Tactical Air Command; USAFSS = United States Air Force Security Service.

<sup>b</sup>This library was authorized 34 professional librarians.



TABLE XLIX

## AVERAGE SEATING CAPACITY AND SIZE OF READING AREA OF BASE LIBRARIES SURVEYED

Major Air Command or Separate Operating Agency <sup>a</sup>	Number of Libraries Participating	Seating Capacity		Square Feet in Reading Area	
		Mean	Median	Mean	Median
ADC	12	42	35	2,674	2,105
AFLC	3	59	61	4,252	4,390
ATC	4	119	138	6,175	5,895
AU	1	611	611	60,000	60,000
HQ COMD	2	48	48	2,206	2,206
MAC	4	90	99	3,339	2,944
SAC	28	79	68	3,707	3,383
TAC	16	59	61	3,202	3,250
USAFSS	1	63	63	2,156	2,156
Total	71	77	61	4,274	3,400

<sup>a</sup>Legend: ADC = Aerospace Defense Command; AFLC = Air Force Logistics Command; ATC = Air Training Command; AU = Air University; HQ COMD = Headquarters Command; MAC = Military Airlift Command; SAC = Strategic Air Command; TAC = Tactical Air Command; USAFSS = United States Air Force Security Service.

TABLE L  
FISCAL YEAR 1967 FINANCIAL RESOURCES FOR BASE LIBRARIES SURVEYED<sup>a</sup>

Base Number	Allocation		Total	Course Enrollment <sup>b</sup>	Dollar Allocation Per Course Enrollment <sup>c</sup>
	Appropriated Funds	Nonappropriated Funds			
1 (U) <sup>d</sup>	\$ 1,595	\$ 3,195	\$ 4,790	517	\$ 9.26
2	10,500	4,224	14,724	762	19.32
3	9,000	3,600	12,600	387	32.56
4	6,776	1,080	7,856	156	50.36
5	2,559	4,346	6,905	178	38.79
6 (U)	800	2,480	3,280	18	182.22
7 (U)	366	1,072	1,438	101	14.24
8	2,225	3,317	5,542	454	12.21
9 (U)	1,835	3,509	5,344	130	41.11
10 (U)	1,200	350	1,550	64	24.22
11 (U)	2,900	1,386	4,286	259	16.55
12 (U)	1,200	830	2,030	165	12.30
13 (U)	1,700	1,400	3,100	59	52.54
14 (U)	0	569	569	195	2.92
15 (U)	1,310	505	1,815	32	56.72
16 (U)	2,850	5,372	8,222	79	104.08
17 (U)	1,333	7,050	8,383	311	26.95
18 (U)	1,550	3,860	5,410	347	15.59
19 (U)	900	3,983	4,883	348	14.03
20	1,400	3,600	5,000	77	64.94
21 (U)	1,140	3,951	5,091	124	41.06
22 (U)	2,601	2,603	5,204	224	23.23
23 (U)	4,691	8,926	13,617	321	42.42
24 (U)	3,032	4,360	7,392	149	49.61
25 (U)	478	1,185	1,663	123	13.52
26 (U)	2,143	3,797	5,940	146	40.68

TABLE L (continued)

Base Number	Allocation		Total	Course Enrollment <sup>b</sup>	Dollar Allocation Per Course Enrollment <sup>c</sup>
	Appropriated Funds	Nonappropriated Funds			
27 (U)	\$ 2,300	\$ 2,888	\$ 5,188	32	\$ 162.13
28 (U)	853	1,400	2,253	108	20.86
29	109,900	0	109,900	652	168.56
30 (U)	6,905	5,250	12,155	128	94.96
31	5,800	3,425	9,225	14	658.93
32	10,133	1,746	11,879	149	79.72
33 (U)	3,500	2,260	5,760	746	7.72
34 (U)	2,838	3,597	6,435	425	15.14
35	3,700	3,925	7,625	290	26.29
36	12,915	1,384	14,299	95	150.52
37	7,471	4,521	11,992	454	26.41
38	20,223	14,259	34,482	659	52.32
39 (U)	1 <sup>c</sup> .000	8,803	18,803	278	67.64
40	1,032	2,073	3,105	19	163.42
41	10,500	8,200	18,700	559	33.45
42	7,500	7,945	15,445	605	25.53
43	3,657	3,655	7,312	72	101.56
44	6,500	4,691	11,191	337	33.21
45	2,000	2,060	4,060	136	29.85
46 (U)	4,782	5,096	9,878	153	64.56
47 (U)	7,575	1,525	9,100	143	63.64
48	4,650	6,548	11,198	232	48.27
49 (U)	2,550	5,550	8,100	383	21.15
50	4,500	5,994	10,494	356	29.48
51 (U)	2,947	2,160	5,107	168	30.40
52	5,550	3,238	8,788	301	29.20
53 (U)	1,000	5,161	6,161	294	20.96

TABLE I. (continued)

Base Number	Allocation		Total	Course Enrollment <sup>b</sup>	Dollar Allocation Per Course Enrollment <sup>c</sup>
	Appropriated Funds	Nonappropriated Funds			
54 (U)	2,475	3,769	6,244	84	74.33
55	3,500	3,871	7,371	322	22.89
56 (U)	3,286	3,775	7,061	317	22.27
57 (U)	895	1,201	2,096	428	4.90
58 (U)	0	963	963	182	5.29
59	9,968	3,700	13,668	421	32.47
60	3,245	4,306	7,551	103	73.31
61	4,587	4,046	8,633	224	38.54
62 (U)	5,000	4,566	9,566	287	33.33
63	5,354	4,612	9,966	670	14.87
64 (U)	4,500	2,751	7,251	484	14.98
65	4,500	4,000	8,500	145	58.62
66	5,124	4,120	9,244	390	23.70
67	6,500	4,920	11,420	345	33.10
68 (U)	4,551	2,986	7,537	407	18.52
69 (U)	2,040	1,900	3,940	120	32.83
70 (U)	1,800	1,930	3,730	109	34.22
71 (U)	800	3,190	3,990	125	31.92
Total	\$395,490	\$258,510	\$654,000	18,677	\$ 35.02

<sup>a</sup>Fiscal year 1967 budget figures are included in the report to extend the range of coverage, even though the time frame of the survey encompassed the following fiscal year.

<sup>b</sup>Course enrollment totals usually are larger than student totals, in that an individual student commonly participates in more than a single course. In this table, course enrollment figures for fiscal year 1968 were applied to budget allocations of fiscal year 1967 to facilitate comparison of expenditures for the two fiscal years.

TABLE 1 (continued)

<sup>c</sup>This term, rather than per capita allocation, was used because the data in the education program survey did not include the total number of individual participants in the program. Only enrollment totals for each course were compiled.

<sup>d</sup>The letter U was used to identify libraries supporting undergraduate programs only.

TABLE LI  
FISCAL YEAR 1968 FINANCIAL RESOURCES FOR BASE LIBRARIES SURVEYED

Base Number	Allocation		Total	Course Enrollment	Dollar Allocation Per Course Enrollment <sup>a</sup>
	Appropriated Funds	Nonappropriated Funds			
1 (U) <sup>b</sup>	\$ 650	\$ 3,000	\$ 3,650	517	\$ 7.06
2	11,000	3,113	14,113	762	18.52
3	8,000	3,600	11,600	387	29.97
4	4,400	1,060	5,460	156	35.13
5	4,003	2,050	6,053	178	34.01
6 (U)	800	2,300	3,100	18	172.22
7 (U)	800	1,000	1,800	101	17.82
8	3,050	3,650	6,700	454	14.76
9 (U)	6,500	3,120	9,620	130	74.00
10 (U)	800	563	1,363	64	21.30
11 (U)	3,000	2,650	5,650	259	21.81
12 (U)	1,340	1,000	2,340	165	14.18
13 (U)	3,300	1,600	4,900	59	83.05
14 (U)	0	369	369	195	1.89
15 (U)	825	381	1,206	32	37.69
16 (U)	4,100	5,600	9,700	79	122.78
17 (U)	1,200	2,900	4,100	311	13.18
18 (U)	1,700	3,860	5,560	347	16.02
19 (U)	2,000	4,030	6,030	348	17.33
20	2,000	3,900	5,900	77	76.62
21 (U)	2,500	1,067	3,567	124	28.77
22 (U)	1,855	3,835	5,690	224	25.40
23 (U)	5,300	8,855	14,155	321	44.10
24 (U)	36	4,200	4,236	149	28.43
25 (U)	4,300	1,890	6,190	123	50.33
26 (U)	1,200	3,530	4,730	146	32.40
27 (U)	2,282	3,500	5,782	32	180.69

TABLE LI (continued)

Base Number	Allocation		Total	Course Enrollment	Dollar Allocation Per Course Enrollment <sup>a</sup>
	Appropriated Funds	Nonappropriated Funds			
28 (U)	\$ 1,200	\$ 1,400	\$ 2,600	108	\$ 24.07
29	99,300	0	99,300	652	152.30
30 (U)	5,611	8,143	13,754	128	107.45
31	7,500	3,850	11,350	14	820.71
32	5,190	3,600	8,790	149	58.99
33 (U)	4,400	2,000	6,400	746	8.58
34 (U)	5,400	3,100	8,500	425	20.00
35	5,500	4,075	9,575	290	33.02
36	4,183	500	4,683	95	49.29
37	7,061	6,127	13,188	454	29.05
38	22,497	11,499	33,996	659	51.59
39 (U)	10,397	6,764	17,161	278	61.73
40	1,216	948	2,164	19	111.79
41	15,000	8,200	23,200	559	41.50
42	6,957	7,945	14,902	605	24.63
43	4,322	3,738	8,060	72	111.94
44	6,300	1,469	7,769	337	23.05
45	3,000	2,100	5,100	136	37.50
46 (U)	5,450	3,600	9,050	153	59.15
47 (U)	6,192	1,893	8,085	143	56.54
48	8,624	3,840	12,464	232	53.59
49 (U)	6,000	7,500	13,500	383	35.25
50	4,250	3,924	8,174	356	22.96
51 (U)	4,250	3,575	7,825	168	46.58
52	3,350	2,575	5,925	301	19.68
53 (U)	2,250	4,887	7,137	294	24.28
54 (U)	3,286	3,760	7,046	84	83.88
55	4,000	3,600	7,600	322	23.60

TABLE LJ (continued)

Base Number	Allocation		Total	Course Enrollment	Dollar Allocation Per Course Enrollment <sup>a</sup>
	Appropriated Funds	Nonappropriated Funds			
56 (U)	\$ 5,734	\$ 4,180	\$ 9,914	317	\$ 31.27
57 (U)	875	1,237	2,112	428	4.93
58 (U)	4,250	500	4,750	182	26.10
59	9,567	2,813	12,380	421	29.41
60	5,060	3,310	8,370	103	81.26
61	5,081	3,494	8,575	224	38.28
62 (U)	6,000	4,609	10,609	287	36.97
63	5,464	4,795	10,259	670	15.31
64 (U)	4,250	3,110	7,360	484	15.21
65	4,250	4,010	8,260	145	56.97
66	4,200	4,286	8,486	390	21.76
67	6,300	4,920	11,220	345	32.52
68 (U)	4,758	5,964	10,722	407	26.34
69 (U)	2,040	1,900	3,940	120	32.83
70 (U)	2,722	1,932	4,654	109	42.70
71 (U)	2,800	3,390	6,190	125	49.52
Total	\$412,978	\$245,705	\$658,683	18,677	35.27

<sup>a</sup>This term, rather than per capita allocation, was used because the data in the education program survey did not include the total number of individual participants. Only enrollment totals for each course were compiled.

<sup>b</sup>The letter U was used to identify libraries supporting undergraduate programs only.



TABLE LII  
 LIBRARY RESOURCES AVAILABLE, AT NO COST TO AIR FORCE STUDENTS,  
 WITHIN FIFTY MILES OF BASE LIBRARIES SURVEYED

Base Number	Library of Civilian Institution Offering Courses on Base	Library of Other College or University	Public Library Only	None
1	.	.	.	.
2	x	.	.	.
3	x	.	.	.
4	x	.	.	.
5	.	.	x	.
6	.	.	x	.
7	.	.	x	.
8	.	.	x	.
9	x	.	.	x
10	x	.	.	.
11	.	.	x	.
12	x	.	.	.
13	.	x	.	.
14	.	.	x	.
15	.	.	x	.
16	.	.	x	.
17	.	.	x	.
18	.	x	.	.
19	x	.	.	.
20	.	x	.	.
21	x	.	.	.
22	x	.	.	.
23	x	.	.	.
24	.	x	.	.
25	x	.	.	.



TABLE LII (continued)

Base Number	Library of Civilian Institution Offering Courses on Base	Library of Other College or University	Public Library Only	None
54	.	.	.	.
55	.	.	.	.
56	.	.	.	.
57	.	.	.	.
58	.	.	.	.
59	.	.	.	.
60	.	.	.	.
61	.	.	.	.
62	.	.	.	.
63	.	.	.	.
64	.	.	.	.
65	.	.	.	.
66	.	.	.	.
67	.	.	.	.
68	.	.	.	.
69	.	.	.	.
70	.	.	.	.
71	.	.	.	.
Total	29	17	19	6

TABLE LIV  
EVALUATION OF BASE LIBRARY SUPPORT OF OFF-DUTY EDUCATION PROGRAMS, AS REPORTED  
BY REPRESENTATIVES OF COLLEGES AND UNIVERSITIES CONCERNED

Base Number	Instructor Opinion				Student Opinion			
	Overall Satis- faction	Overall Dissatis- faction	Unknown		Overall Satis- faction	Overall Dissatis- faction	Unknown	No Reply to Questionnaire
1	x	.	.	.	.	.	.	.
2	.	.	.	.	.	.	.	.
3	.	.	.	.	.	.	.	x
4	x	.	.	.	.	.	.	.
5	.	.	.	.	.	.	.	x
6	.	.	.	.	.	.	.	x
7	.	.	.	.	.	.	.	x
8	x	.	.	.	.	.	.	.
9	.	.	.	.	.	.	.	x
10	x	.	.	.	.	.	.	.
11	.	.	.	.	.	.	.	x
12	.	.	.	.	.	.	.	x
13	x	.	.	.	.	.	.	.
14	.	.	.	.	.	.	.	x
15	.	.	.	.	.	.	.	x
16	x	.	.	.	.	.	.	.
17	.	.	.	.	.	.	.	x
18	.	.	.	.	.	.	.	x
19	x	.	.	.	.	.	x	.
20	.	.	.	.	.	.	.	x
21	x	.	.	.	.	.	.	.
22	x	.	.	.	.	.	.	.
23	.	.	.	.	.	.	.	.
24	x	.	.	.	.	.	x	.
25	x	.	.	.	.	.	.	.

TABLE LIV (continued)

Base Number	Instructor Opinion			Student Opinion				No Reply to Questionnaire
	Overall Satis- faction	Overall Dissatis- faction	Unknown	Overall Satis- faction	Overall Dissatis- faction	Unknown		
26	.	.	.	.	.	.	.	.
27	x	.	.	.	.	.	.	x
28	.	.	.	.	.	.	.	.
29	x	.	.	.	.	.	.	x
30	x	.	.	.	.	.	.	.
31	.	.	.	.	.	.	.	x
32	.	.	.	.	.	.	.	x
33	x	.	.	.	.	x	.	.
34	x	.	.	.	.	.	.	.
35	x	.	.	.	.	.	.	.
36	.	.	.	.	.	.	.	.
37	.	.	.	.	.	.	.	x
38	x	.	.	.	.	.	.	x
39	.	.	.	.	.	.	.	.
40	.	.	.	.	.	.	.	.
41	.	.	.	.	.	.	.	.
42	.	.	x	.	.	.	.	.
43	.	.	.	.	.	.	.	.
44	.	x	.	.	.	.	.	x
45	x	.	.	.	.	.	.	.
46	.	.	.	.	.	x	.	.
47	x	.	.	.	.	.	.	.
48	x	.	.	.	.	.	.	.
49	x	.	.	.	.	.	.	.
50	x	.	.	.	.	.	.	.
51	x	.	.	.	.	.	.	.

TABLE LIV (continued)

Base Number	Instructor Opinion			Student Opinion			No Reply to Questionnaire
	Overall Satis- faction	Overall Dissatis- faction	Unknown	Overall Satis- faction	Overall Dissatis- faction	Unknown	
52	x	.	.	.	.	x	.
53	x	.	.	x	.	.	.
54	.	.	.	.	.	.	x
55	.	.	x	.	.	x	.
56	.	.	.	.	.	.	x
57	.	.	.	.	.	.	x
58	.	.	.	.	.	.	x
59	.	.	.	.	.	.	x
60	.	x	.	.	.	x	.
61	.	x	.	x	.	.	.
62	.	.	.	.	.	.	x
63	.	x	.	.	x	.	.
64	.	x	.	.	.	x	.
65	x	.	.	x	.	.	.
66	.	.	.	.	.	.	x
67	.	x	.	x	.	.	.
68	x	.	.	.	.	x	.
69	x	.	.	x	.	.	.
70	.	x	.	x	.	.	.
71	x	.	.	x	.	.	.
Total	30	8	2	27	4	9	31

APPENDIX E

QUESTIONNAIRE FORMS

## EDUCATION PROGRAM SURVEY

Name of college or university: \_\_\_\_\_

Title of course: \_\_\_\_\_

Identification number of course: \_\_\_\_\_

Circle the word identifying the level of the course:   undergraduate  
graduate

Number enrolled in course during fall term of 1967: \_\_\_\_\_

Reading requirements:

### (1) Books

On the attached sheet give the title, author, and copyright date of each book on the instructor's required reading list for this course. Identify the sheet by course number. If there is no required reading list of books, write "N/A" in the block below:

Note: If the list includes the prescribed text for the course, insert the word text in parentheses after the title of the book.

☐

On an attached sheet give the title, author, and copyright date of each book on the instructor's recommended reading list for this course. Identify the sheet by course number. If there is no recommended reading list of books, write "N/A" in the block below:

☐

### (2) Periodicals and newspapers

On an attached sheet give the title of each periodical and newspaper on the instructor's required reading list for this course. If there is no required list of periodicals and newspapers, write "N/A" in the block below.

☐

On an attached sheet give the title of each periodical and newspaper on the instructor's recommended reading list for this course. If there is no recommended list of periodicals and newspapers, write "N/A" in the block below:

☐



**Library services responsibility:**

(1) What responsibilities, if any, have been assumed by the college or university offering this course, with regard to supplying library services, resources, or financial aid to the base library in support of the course?

(2) What special responsibilities have been assumed by the Education Services Office with regard to supplying library services, resources, or financial aid to the base library in support of the course?

SURVEY OF BASE LIBRARIES SUPPORTING  
EDUCATIONAL PROGRAMS OF CIVILIAN INSTITUTIONS

\_\_\_\_\_ number

Librarian responsible for preparing this report.

\_\_\_\_\_  
(Mrs., Mrs., Miss) - circle one

1. Books

**STEP 1. Refer to Book List 1A.**

Indicate by a check mark in the appropriate block next to each item whether (1) the book is in your library collection, (2) the book is not a part of your library collection but has been made available to your library by another library or by the civilian institution that offers courses at your base, (3) the book is included on a purchase order placed by your library prior to receipt of this questionnaire, or (4) none of the other three possible answers applies. If the item is available in more than one copy, specify in the fifth block the total number of copies. (Note: An equivalent unabridged edition of the same book by a different publisher, or a revised edition of the same book, is acceptable as a substitute for the specified edition.)

**STEP 2. Refer to Book List 1B.**

Follow the procedures used for Book List 1A.

**STEP 3. Refer to Subject Category List 1A.**

Using an ordinary ruler, measure the combined thickness of the shelflist catalog cards within the range of Dewey Decimal numbers given for each subject category. Indicate in the column to the right the total number of inches of thickness of the shelflist cards for each range of numbers. List additional fractions of 1/4 inch or more. If the thickness of the shelflist cards within a subject category is less than one inch, count the actual number of shelflist cards for that subject category. Enter this number in the far-right block.

**STEP 4. Refer to Subject Category List 1B.**

Using the first inch of the shelflist catalog cards within each range of Dewey Decimal numbers, enter the total number of titles that

have a copyright date of 1962 or later. Exclude those that are designated juvenile literature. If the thickness of the shelflist cards within a subject category, as represented by the range of Dewey Decimal numbers, is less than one inch, count the cards and enter the total number of titles within the category and then the number of those titles that have a copyright date of 1962 or later.

## II. Periodicals and Newspapers

### STEP 5. Refer to Periodical and Newspaper List 1A.

Indicate by a check mark in the appropriate block next to each item whether (1) your library has a subscription to it, (2) your library does not have a subscription to the item, but current issues are made available to your library by another library, by the civilian institution that offers courses at your base, or through the USAF Magazine Kit program, (3) a subscription to the item is included on a purchase order placed by your library prior to receipt of this questionnaire or (4) none of the other three possible answers applies. In the fifth block to the right, give the earliest date (month and year) of a substantially unbroken run of the item, provided it is in your library collection or on loan to your library.

### STEP 6. Refer to Periodical and Newspaper List 1B.

Follow the procedures used for Periodical and Newspaper List 1A.

## III. Indexes and Abstracts

### STEP 7. Refer to Index and Abstract List 1A.

Indicate by a check mark in the appropriate block next to each item whether (1) your library has a subscription to it, (2) your library does not have a subscription to the item, but current issues are made available to your library by another library or by the civilian institution that offers courses at your base, (3) a subscription to the item is included on a purchase order placed by your library prior to receipt of this questionnaire, or (4) none of the other three possible answers applies. In the fifth block to the right, give the earliest date (year only) of a substantially unbroken run of the item, provided it is in your library collection or on loan to your library.

### STEP 8. Refer to Index and Abstract List 1B.

Follow the procedures used for Index and Abstract List 1A.

#### IV. Dictionaries

##### STEP 9. Refer to Dictionary List 1A.

Indicate by a check mark in the appropriate block next to each item whether (1) your library has the dictionary in its collection; (2) the dictionary is not a part of your collection but has been made available to your library by another library or by the civilian institution that offers courses at your base; (3) the dictionary is included on a purchase order placed by your library prior to receipt of this questionnaire; or (4) none of the other three possible answers applies.

##### STEP 10. Refer to Dictionary List 1B.

Follow the procedures used for Dictionary List 1A. If any dictionary on Dictionary List 1B is in your library collection or on loan to your library, enter its copyright date in the fifth block to the right.

#### V. Encyclopedias

##### STEP 11. Refer to Encyclopedia List 1A.

Indicate by a check mark in the appropriate block next to each item whether (1) your library has the encyclopedia in its collection; (2) the encyclopedia is not a part of your collection but has been made available to your library by another library or by the civilian institution that offers courses at your base; (3) the encyclopedia is included on a purchase order placed by your library prior to receipt of this questionnaire; or (4) none of the other three possible answers applies. If the encyclopedia is in your library collection or on loan to your library, enter its copyright date in the fifth block to the right.

##### STEP 12. Refer to Encyclopedia List 1B.

Follow the procedures used for Encyclopedia List 1A.

#### VI. Professional Reference Assistance

##### STEP 13. On the line below, state the total number of hours each week during which the library is open to the public.

---

##### STEP 14. On the line below, state the total number of hours each week during which a professional librarian is available for reference assistance.

(Note. For purposes of this study, a professional librarian is one who holds a degree in library science from a nationally accredited library

school, or who has successfully completed at least 24 semester hours or 36 quarter hours toward such a degree.)

\_\_\_\_\_  
 STEP 15. On the line below, state the number of days each week during which the library offers professional reference service at least three hours after the close of the official duty day. (Note: For purposes of this study, professional reference service is that which is made available by a professional librarian who is present in the library.)

\_\_\_\_\_  
 STEP 16. On the line below, state the number of professional librarians authorized for your library.

\_\_\_\_\_  
 VII. Supplemental Data

STEP 17. On the line below, state the number of square feet of floor space in the reading area of your library

\_\_\_\_\_  
 STEP 18. On the line below, state the seating capacity of your library.

\_\_\_\_\_  
 STEP 19. Indicate by a check mark on the appropriate line below whether patrons have access to microtext materials in your library.

\_\_\_\_\_  
 (yes)      (no)

STEP 20. If the answer to STEP 19 is yes, indicate by a check mark on the appropriate line below whether your library has each of the named resources.

a. microfilm reels

\_\_\_\_\_  
 (yes)      (no)

b. microfiche panels

\_\_\_\_\_  
 (yes)      (no)

c. microfilm reader-printer

_____	_____
(yes)	(no)

d. microfiche reader-printer

_____	_____
(yes)	(no)

STEP 21. On the lines below, enter the Fiscal Year 1967 and Fiscal Year 1968 budget allocation, from appropriated and non-appropriated funds, for your library in each of the named categories. Estimate in the event precise apportionment is unknown.

	<u>Appropriated</u> <u>Funds</u>	<u>Nonappropriated</u> <u>Funds</u>
a. Fiscal Year 1967		
(1) books	_____	_____
(2) periodicals and newspapers	_____	_____
(3) bindery	_____	_____
b. Fiscal Year 1968		
(1) books	_____	_____
(2) periodicals and newspapers	_____	_____
(3) bindery	_____	_____

STEP 22. Give the names and locations of other libraries within a radius of 50 miles of your base library, where military personnel from your base have access to professional reference assistance, college-level resources, and borrowing privileges at no cost to the individual.

_____	_____	_____
Name of Library	Location	Distance
_____	_____	_____
Name of Library	Location	Distance

VIII. Questionnaire Completion

STEP 23. Estimate the number of man-hours spent in completing this questionnaire.

---

[illegible]



[illegible]



Subject Category  
List 1B

[illegible]

[illegible]

### Periodical and Newspaper List 1B

[illegible]

Index and Abstract  
List 1A

	(1) LIBRARY HAS SUBSCRIPTION TO ITEM.	(2) ACTUAL COLLECTION LIBRARY HAS NO SUB- SCRIPTION TO BUT LIBRARY HAS NO SUB- SCRIPTION TO CURRENT ISSUES ARE RECEIVED.	(3) SUBSCRIPTION IS IN PURCHASE ORDER.	(4) NONE OF THE OTHER ANSWERS APPLIES.	(5) EARLIEST DATE OF SUBSTAN- TIALITY UNBROKEN RUN OF ITEM.
<u>Readers' Guide to Periodical Literature</u> (unabridged edition)					
<u>Air University Library Index to Military Periodicals</u>					
<u>Social Sciences and Humanities Index</u>					
<u>Applied Science and Technology Index</u>					
<u>PAIS (Public Affairs Information Service)</u>					

Index and Abstract  
List 1B

		<div style="text-align: center;">           SUBJECT CATEGORY *            LIBRARY HAS SUBJECT IN            FILM.            ALTHOUGH LIBRARY HAS NO SUB-            JECT INDEX, LIBRARY HAS INDEXES FOR            SUBJECTS WHICH IS A LIBRARY            NAME OF THE INDEX ANSWER            EARLIEST DATE OF PUBLICATION            OR FILM.         </div>				
		(1)	(2)	(3)	(4)	(5)
Substitute item						
Substitute item						
Substitute item						
*If your library has a specialized index or abstract other than the one named for any of the subject categories, write the title of the index or abstract and its copyright date, as well as the subject category that you feel it covers, in one of the "substitute item" blocks.						

[illegible]



[illegible]

[illegible]

[illegible]

APPENDIX F

SPECIALIZED BIBLIOGRAPHIC TOOLS

Specialized Indexes and Abstracts

<u>Graduate Course</u>	<u>Index or Abstract</u>
Aeronautics	STAR (Scientific, Technical and Aerospace Reports) and IAA (International Aerospace Abstracts)
Astronautics, including Aerospace Sciences	STAR (Scientific, Technical and Aerospace Reports) and IAA (International Aerospace Abstracts)
Astronomy	Meteorological and Geoastro- physical Abstracts
Biology, including Life Science	Biological Abstracts
Business Administration, including Management	Business Periodicals Index
Chemistry	Chemical Abstracts
Civil Engineering	Engineering Index and Applied Science and Technology Index
Economics	Social Sciences and Humanities Index

Specialized Indexes and Abstracts (continued)Graduate CourseIndex or Abstract

Electrical or Electronics  
Engineering

Electrical and Electronics Abstracts  
and  
Engineering Index  
and one of the following:  
(a) Applied Science and Technology  
Index  
(b) U. S. Government Research  
and Development Reports Index  
(former title Government Wide  
Index to Federal Research and  
Development Reports)

English Literature or  
American Literature

Book Review Index  
or  
Book Review Digest  
and one of the following  
(a) Essay and General Literature  
Index  
(b) Social Sciences and Humanities  
Index

Education

Education Index  
and  
Psychological Abstracts

General Science

Applied Science and Technology  
Index

Geology

Meteorological and Geocastro-  
physical Abstracts

History

Historical Abstracts

Specialized Indexes and Abstracts (continued)

<u>Graduate Course</u>	<u>Index or Abstract</u>
International Affairs, including Political Science	International Political Science Abstracts or PAIS (Public Affairs Information Service)
Mathematics	Mathematical Reviews
Meteorology	Meteorological and Geoastro- physical Abstracts
Physics	Physics Abstracts or Nuclear Science Abstracts
Psychology	Psychological Abstracts
Public Administration	Business Periodicals Index
Sociology	Social Sciences and Humanities Index

Specialized Dictionaries

<u>Graduate Course</u>	<u>Dictionary</u>
Aeronautics	United States Department of the Air Force's Glossary of Standard- ized Terms and (a) Elsevier's Dictionary of Aeronautics or (b) AGARD Aeronautical Multi- lingual Dictionary
Astronautics, including Aerospace Sciences	Dictionary of Guided Missiles and Space Flight (Van Nostrand) or J. L. Nayler's Dictionary of Astronautics or NASA's Short Glossary of Space Terms
Biology	Abercrombie's A Dictionary of Biology or Henderson and Henderson's A Dictionary of Biological Terms
Business Administration, including Management	Clark and Gottfried's Dictionary of Business and Finance (Crowell) or Encyclopedic Dictionary of Business Finance (Prentice-Hall)
Chemistry	Encyclopedia of Chemical Tech- nology (Interscience) or Condensed Chemical Dictionary (Reinhold) or Van Nostrand's International Encyclopedia of Chemical Science



Specialized Dictionaries (continued)

<u>Graduate Course</u>	<u>Dictionary</u>
Civil Engineering	Thesaurus of Engineering Terms (Engineers Joint Council)
Education	Good's Dictionary of Education (McGraw-Hill)
Electrical or Electronics Engineering	Oldfield's The Practical Dictio- nary of Electricity and Electronics or Roget's A Dictionary of Electri- cal Terms or The International Dictionary of Physics and Electronics (Van Nostrand)
English or American Literature	Beckson and Ganz's A Reader's Guide to Literary Terms: A Dictionary
General Science	Van Nostrand's Scientific Encyclopedia
Geology	Glossary of Geology and Related Sciences (American Geological Institute)
Mathematics	Karush's The Crescent Dictio- nary of Mathematics (Macmillan) or James' Mathematics Dictionary (Van Nostrand) or International Dictionary of Applied Mathematics

Specialized Dictionaries (continued)

<u>Graduate Course</u>	<u>Dictionary</u>
Meteorology	Meteorological Glossary (London: H. M. Stationery Office) or Huschke's Glossary of Meteorology (American Meteorological Society)
Physics	Glossary of Terms Frequently Used in Physics and Computers (American Institute of Physics) or Ballentyne and Walker's A Dictio- nary of Named Effects and Laws in Chemistry, Physics and Mathematics
Psychology	Baldwin's Dictionary of Philosophy and Psychology (Macmillan) or English and English's A Compre- hensive Dictionary of Psychological and Psychoanalytical Terms A Guide to Usage
Sociology	Fairchild's Dictionary of Sociology or Young's Dictionary of Social Welfare

Specialized Encyclopedias

<u>Graduate Course</u>	<u>Encyclopedia</u>
Aeronautics	McGraw-Hill Encyclopedia of Science and Technology
Astronautics, including Aerospace Sciences	Audel's Encyclopedia of Space Science
Astronomy	Space Encyclopedia: A Guide to Astronomy and Space Research or Larousse Encyclopedia of Astronomy
Biology, including Life Science	Gray's Encyclopedia of the Biological Sciences
Chemistry	Encyclopedia of Chemical Technology (Interscience) or Encyclopedia of Polymer Science and Technology (Interscience) or Van Nostrand's International Encyclopedia of Chemical Science
Civil Engineering	Jones and Schubert's Engineering Encyclopedia
Education	Smith's The Educator's Encyclopedia (Prentice-Hall)

Specialized Encyclopedias (continued)Graduate CourseEncyclopedia**General Science**

McGraw-Hill Encyclopedia of  
Science and Technology  
or  
Harper Encyclopedia of Science

**Geology**

Larousse Encyclopedia of the  
Earth

**Mathematics**

Universal Encyclopedia of  
Mathematics

**Meteorology**

McGraw-Hill Encyclopedia of  
Science and Technology

**Physics**

Encyclopaedic Dictionary of  
Physics (edited by James Thewlis)

**Psychology**

Encyclopedia of the Social  
Sciences (edited by R. A.  
Seligman) (Macmillan)

**Sociology**

Encyclopedia of the Social  
Sciences (edited by R. A.  
Seligman) (Macmillan)

APPENDIX G

LIBRARIES OF AIR FORCE SYSTEMS COMMAND

The five base libraries of Air Force Systems Command which met the criteria for participation in the survey were those at Eglin Air Force Base, Florida, Hanscom Field, Massachusetts, Holloman Air Force Base, New Mexico, Kirtland Air Force Base, New Mexico, and Patrick Air Force Base, Florida. Although these libraries were not able to participate in the survey, a limited amount of information about them was obtained through the office of John L. Cook, Director of Air Force Library Service.

Information about three of the libraries was derived almost exclusively from their Semiannual Library Reports of January 1, 1967, to June 30, 1967. In the case of the other two libraries, data from other sources than the Semiannual Library Report enabled the writer to prepare an evaluation similar to that completed on the seventy-one participating libraries. Even so, the latter information was not verified by the writer, who made no attempt to communicate directly with the base education services officers or base librarians.

The Eglin Air Force Base Library Semiannual Library Report for the period January 1 through June 30, 1967, indicated that the library was authorized two professional librarians, had spent \$7,872 on books and subscriptions, had 33,267 shelflisted items, 690 periodical subscriptions and 100 newspaper subscriptions. It had a seating

capacity of 34, and occupied an area of 3,500 square feet.<sup>1</sup> Its college-level, off-duty education program was with Florida State University.<sup>2</sup>

The Semiannual Library Report of Holloman Air Force Base Library for the same period indicated that the library was authorized one professional librarian, had spent \$4,635 on books and subscriptions, had 20,599 shelflisted items, 345 periodical subscriptions and 27 newspaper subscriptions. It had a seating capacity of 60, and it occupied an area of 4,126 square feet.<sup>3</sup> It supported an undergraduate program with New Mexico State University and a graduate program with the University of New Mexico.<sup>4</sup>

The base library of the Air Force Eastern Test Range, Patrick Air Force Base, stated in its Semiannual Library Report for the period cited that it had one professional librarian, had spent \$4,581 on books and subscriptions, had 32,297 shelflisted items, 385 periodical subscriptions and 10 newspaper subscriptions. It had a seating capacity

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<sup>1</sup>Eglin Air Force Base, Florida, Semiannual Library Report, January 1, 1967, to July 1, 1967.

<sup>2</sup>Letter, Colonel William G. Barton, Directorate for Personnel Training and Education (AFPTRE), Headquarters United States Air Force, to the major air commands and separate operating agencies, May 5, 1967, "Major Post-Secondary Program Opportunities," and Attachment 1 thereto.

<sup>3</sup>Holloman Air Force Base, New Mexico, Semiannual Library Report, January 1, 1967, to June 30, 1967.

<sup>4</sup>Colonel William G. Barton, loc. cit.

of 128, and occupied an area of 11,200 square feet.<sup>5</sup> The base offered an undergraduate program through Rollins College and a graduate program through Florida State University and one through the University of Florida.<sup>6</sup>

Based on the data that were made available through the Director of Air Force Library Service, an evaluation of the Hanscom Field Library was conducted in the manner used for the participating libraries. There were no known required or recommended reading lists of instructors in the entirely undergraduate program conducted by the Metropolitan College of Boston University. The total enrollment was sixty-six. Courses taught included American history, freshman English, principles of sociology and general economics. The library had a minimum of one hundred book titles in every subject category. It had at least twenty current titles in every subject category. There were no periodicals or newspapers on instructors' required or recommended lists of readings. There was an available copy of Readers' Guide to Periodical Literature, as well as a copy of the Air University Library Index to Military Periodicals. A copy of Social Sciences and Humanities Index and one of Applied Science and

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<sup>5</sup>Patrick Air Force Base, Florida, Semiannual Library Report, January 1, 1967 to July 1, 1967.

<sup>6</sup>Colonel William G. Barton, loc cit



Technology Index were also available. The library held copies of Webster's Third New International Dictionary, the Random House Dictionary of English Usage and Webster's New International Dictionary, second edition. A current copy of each of the following encyclopedias was also on hand: Encyclopaedia Britannica, Encyclopedia Americana and Collier's Encyclopedia. The one librarian authorized provided reference service forty hours weekly, but none after normal duty hours. A substantially unbroken run of Readers' Guide to Periodical Literature, covering a three-year period, was in the collection. The reading area of the library covered 2,800 square feet of floor space and had a seating capacity of 46. No microtext materials were available. In fiscal year 1967 the library at Hanscom Field had a budget allocation of \$1,945 in appropriated funds and \$675 in nonappropriated funds, or a total of \$2,620. The dollar allocation per enrollment was \$39.70. In fiscal year 1968 this library had a budget allocation of \$4,476 in appropriated funds and \$699 in nonappropriated funds. The total, \$5,175, provided a dollar allocation of \$78.26 per enrollment. The library resources were supplemented by those of the Boston Public Library. Had a rating been rendered on this library, it would have been in the category of satisfactory, based on a percentage score of 68.

Similar data were made available on the Kirtland Air Force

Base Library by the Director of Air Force Library Service. There was no reading list of required books, as far as the instructors of the undergraduate program offered by the University of Albuquerque were concerned. Of the thirty-two books on recommended reading lists, the library had four. Courses taught included freshman English, educational psychology and a survey of English literature. In regard to the curriculum-related subject categories, the library had a minimum of one hundred book titles in every subject category. It had at least twenty current titles in every subject category. There was no required reading list of periodicals and newspapers. One periodical was listed for recommended reading, and it was not available in the library. The library did not have a copy of Readers' Guide to Periodical Literature, the Air University Library Index to Military Periodicals, Social Sciences and Humanities Index, Applied Science and Technology Index or PAIS (Public Affairs Information Service). It did have a copy of Webster's Third New International Dictionary but not the Random House Dictionary of English Usage or Webster's New International Dictionary, second edition. Copies of the following encyclopedias, in 1962 or later editions, were available: Encyclopaedia Britannica, Encyclopedia Americana and Collier's Encyclopedia. One librarian was authorized during the period covered by the survey, however, an additional librarian position was reported

to be authorized on July 1, 1968. At the time of the survey, only twenty-five hours of professional reference assistance was available to patrons weekly, and this did not extend to hours after normal duty hours. Back issues of Readers' Guide to Periodical Literature, covering a three-year period or more, were not available. The reading area of the library included 1,500 square feet of floor space and a seating capacity of 60. No microtext materials were available. In fiscal year 1967 the budget allocation for books, periodicals and newspapers was as follows: \$7,400 in appropriated funds and \$2,700 in nonappropriated funds, or a total of \$10,100. Since the enrollment totaled 58, the dollar allocation per enrollment was \$172.41. In fiscal year 1968, the budget allocation for books, periodicals and newspapers was as follows: \$8,500 in appropriated funds and \$3,800 in nonappropriated funds, or a total of \$12,300. The dollar allocation per enrollment was \$212.07. The Zimmerman Library of the University of New Mexico was available to Air Force students from the base. Had a rating been rendered on this library, it would have been in the category of unsatisfactory, based on the percentage score of 33.